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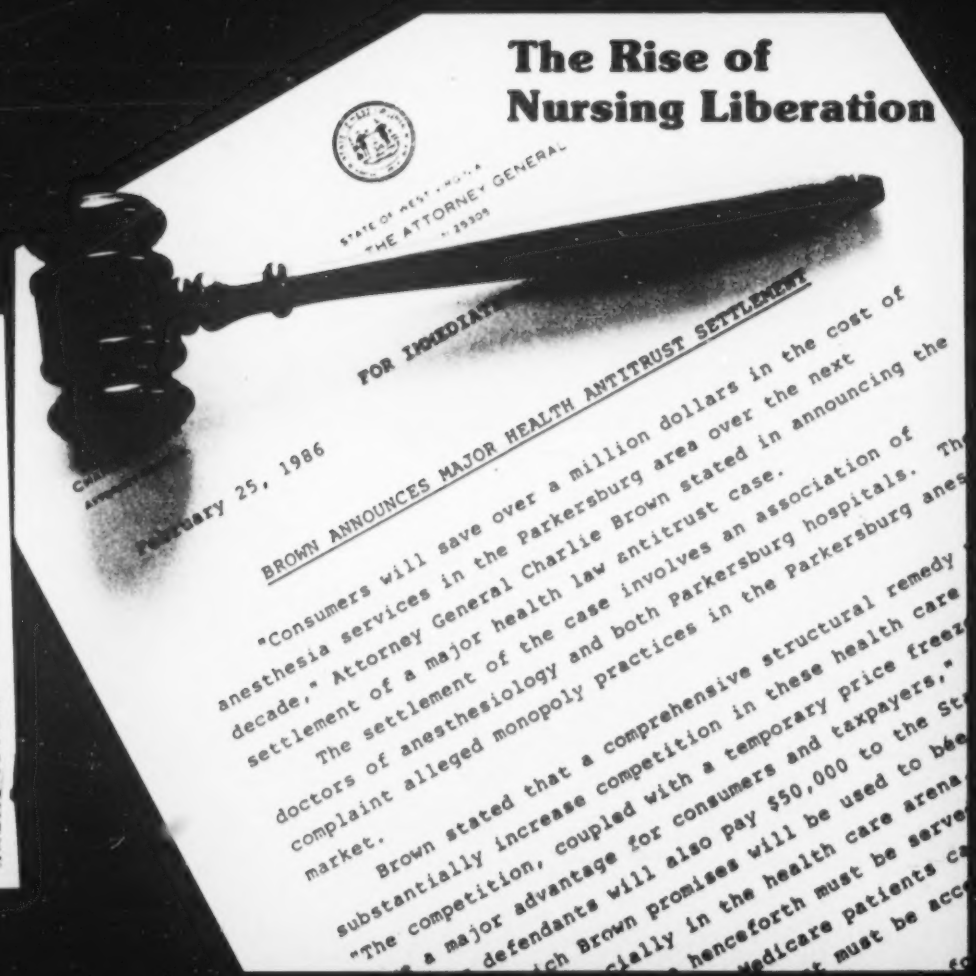
Nursing HEALTH CARE

VOLUME 7, NUMBER 9 NOVEMBER 1986

The Rise of Nursing Liberation


THE ATTORNEY GENERAL
FOR IMMEDIATE
February 25, 1986
BROWN ANNOUNCES MAJOR HEALTH ANTITRUST SETTLEMENT
"Consumers will save over a million dollars in the cost of anesthesia services in the Parkersburg area over the next decade," Attorney General Charlie Brown stated in announcing the settlement of a major health law antitrust case.
The settlement of the case involves an association of doctors of anesthesiology and both Parkersburg hospitals. The complaint alleged monopoly practices in the Parkersburg anes
market.
Brown stated that a comprehensive structural remedy substantially increase competition in these health care
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a major advantage for consumers and taxpayers,"
defendants will also pay $50,000 to the St
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Nursing & HEALTH CARE

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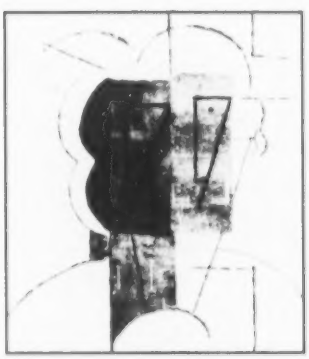

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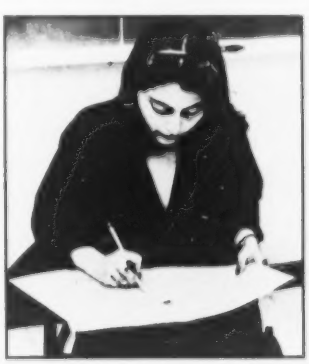

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WASHINGTON FOCUS

99th Congress: Appropriations Up, Reimbursement Gains

By Kevin L. Morrissey
Director of Communications, NLN

The sun finally set on the 99th Congress, albeit a full two weeks behind schedule. Amid the flurry of eleventh hour activity, legislators agreed upon a budget reconciliation package within Gramm-Rudman deficit reduction targets and also acceptable to the administration, approved a massive $576 billion appropriations bill for government operations in FY87, made several adjustments in the Medicare and Medicaid programs, and introduced a number of proposals that will likely come to fruition in the next Congress.

Overall, nursing fared well in this session. Both the increase in appropriations for nursing education and research and the provision for direct reimbursement of nurse anesthetists under Medicare represent significant victories. On the down side, the Health Care Freedom of Choice Act, which would have enabled third party reimbursement of nurses under the Federal Employees Health Benefits Plan, never picked up needed momentum in the Senate, after passage in the House.

FY87 Appropriations Up $3.4 Million

For fiscal year 1987, $53.3 million was appropriated for nursing education and $19 million for nursing research (see detailed breakdown below).

Federal Appropriations for Nursing Education and Research

Category	FY86	FY87
Advanced Nurse Education	$16,500,000	$16,750,000
Nurse Practitioner/ Nurse Midwife Programs	12,000,000	12,000,000
Special Projects	9,500,000	9,500,000
Demonstration Projects	1,350,000	1,675,000
Advanced Nurse Traineeships	11,500,000	11,750,000
Nurse Anesthetists	800,000	800,000
Faculty Fellowships	550,000	825,000
TOTAL (Nursing Education)	$52,200,000	$53,300,000
Nursing Research	$16,700,000	$19,000,000*
GRAND TOTAL	$68,900,000	$72,300,000

**At least $2.0 million to be spent on National Research Service Awards.*

Nurse Anesthetists Gain Medicare Reimbursement

A number of provisions included in the budget reconciliation measure (H.R. 5300) affect Medicare and Medicaid. Of particular note is that nurse anesthetists may bill directly for services rendered to Medicare patients, effective October 1, 1988.

Other adjustments to the Medicare program include:

- a 1.15 percent increase in payments to hospitals in FY87;
- a formula for limiting hospital capital cost payments, beginning in the new fiscal year;
- a shift in outpatient surgery payments for hospitals from the present cost reimbursement basis to a prospective rate similar to payments to free-standing surgery centers;
- a cap on the beneficiary hospital deductible at $520 for FY87, with future increases indexed to the rate of increase in DRG rates;
- mandated hospital discharge planning and patient notification of discharge rights;
- an overall increase of 3.2 percent in payments to physicians;
- a cap on the charges of physicians who do not accept assignment, and
- increased capacity to adjust physician payment levels when they are found to be inherently unreasonable.

The exception to the overall budget-cutting scheme of the reconciliation bill is a modest growth in the Medicaid program, with eligibility expanded to certain low-income pregnant women and infants, and to certain aged or disabled persons with incomes up to federal poverty lines.

Focus on Nursing Home Reform

A significant amount of activity toward the end of the congressional session focused on legislative proposals responding to recommendations in the Institute of Medicine nursing home study, released earlier this year. Although no consensus was reached this round, the momentum was such that nursing home reform clearly will be a priority item on the agenda for the 100th Congress.

Senate amendments to H.R. 1868, which was passed by the House in 1985, were proposed by Senators John Heinz (R-Pennsylvania) and John Glenn (D-Ohio), Senate Special Aging Committee chair and ranking minority member, respectively. They called for mandatory nurses aide training, improved survey and certification procedures, and increased emphasis on patients' rights. However, H.R. 1868 did not pass the Senate before adjournment.

In addition, House Energy and Commerce Committee Chair John Dingell (D-Michigan) introduced H.R. 5450, the Medicaid Nursing Home Quality Care Amendments. This proposal contained many of the same provisions, along with elimination of the distinction between intermediate care and skilled nursing facilities.

Around the Bend

Speculation regarding health policy initiatives in the 100th Congress follows two tracks: cost-saving forays into capitated systems, vouchers, and the like on one hand, and tougher quality assurance measures on the other.

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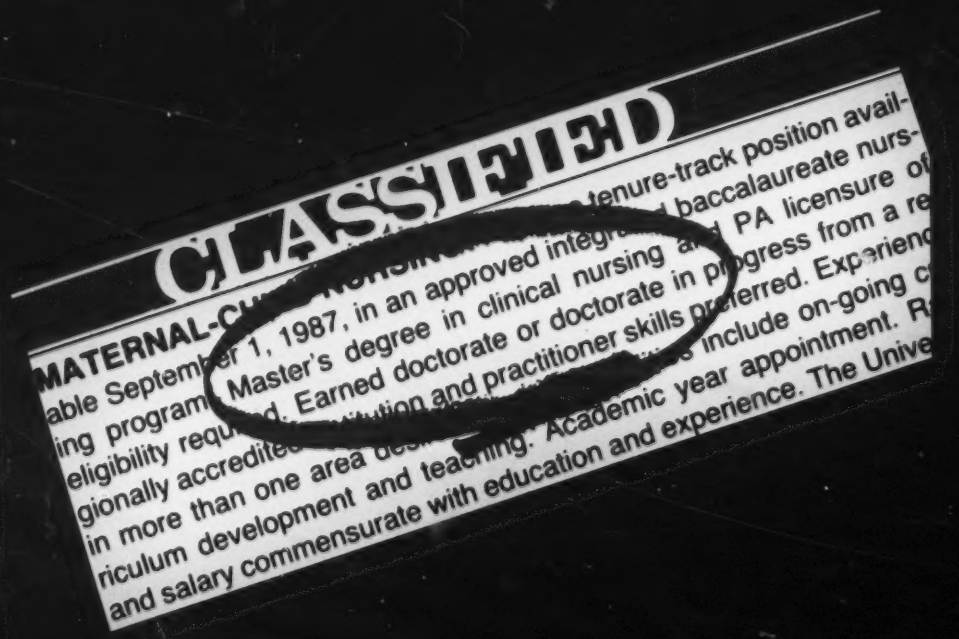
Graduate Education 1987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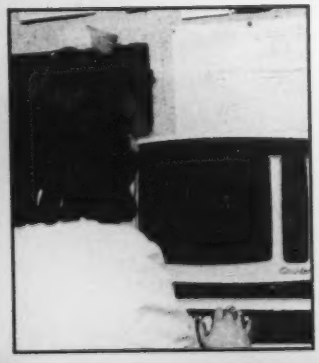

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NURSING & HEALTH CARE offers diverse views on subjects of interest to readers. Articles represent the opinions of individual contributing authors and are not necessarily those of the National League for Nursing.

Nursing's Diverse Master's Programs: The State of the Art

PATRICIA R. FORNI

Graduate faculties have been arguing for years about the appropriate makeup of a master's program in nursing. Mayhew and Ford have said of the master's degree that it is "a bit like a streetwalker, one for every taste and every pocketbook [1]." Without question, master's education in nursing is diverse. Knowing just how diverse will help us not only form a clear picture of the state of master's education today, but also make any changes that might be needed.

Today's Master's Degrees

In terms of the types of master's degrees in nursing awarded by National League for Nursing (NLN)-accredited programs, by far the greatest number are the master of science in nursing (MSN), which 54 programs award, and the master of science (MS), which 57 programs award. Seven programs award the master of nursing (MN), one offers the master of nursing science (MNSc), two offer the master of arts (MA), 2 offer the master of public health (MPH), and one offers the master of education (MEd). Several schools offer more than one degree option at the master's level. Table 1 shows the degrees awarded in NLN-accredited master's programs for 1984-85 [2].

Patricia R. Forni, PhD, RN, FAAN, is dean of the school of nursing at Southern Illinois University at Edwardsville.

Forty-three states, the District of Columbia, and Puerto Rico have at least one NLN-accredited master's program. Forty-nine percent of the accredited programs are located in just nine states (see Table 2).

Table 3 compares the regional distribution of NLN-accredited master's programs in 1974-75 and 1984-85 [3]. With a 287 percent increase, the southern region shows the most marked growth in programs for the period.

In 1974-75, there were 65 NLN-accredited master's programs in nursing; as of February 1985, there were 132, which represents a 203 percent increase in 10 years.

According to the latest NLN *Nursing Data Review 1985*, 18,112 students were enrolled in 154 master's programs in 1983-84, which was a 6.5 percent increase over the previous year [4]. The 5,039 graduations during 1982-83 represented a 2.1 percent decrease over the previous year. The shift from full-time to part-time enrollment is notable: in the decade from 1974 to 1983, the percentage of full-time enrollments dropped from 56.3 percent to 34.6 percent.

Data from a 1984 national survey of Council of Graduate Schools' member schools showed an overall decrease of 0.4 percent in enrollment for master's level students [5]. However, first-time graduate enrollment increased by 8.2 percent at the master's level, and the number of applications for master's study increased by 4.3 percent. The number of graduate assistants increased by 4.6 percent, and the number of graduate fellows increased by 5.6 percent.

Based on American Association of Colleges of Nursing (AACN) institutional data on enrollments and graduations in graduate programs from 1981 to 1985, Murphy believes "the backward trends in full-time enrollment in master's programs is a continuing cause for concern [6]." The AACN data reflect an annual change in full-time enrollment of −2.8 percent for all of the schools that reported for 1984-85, and an annual change of 15.2 percent in part-time enrollments for the same period. The shift to part-time enrollment undoubtedly will affect graduations negatively for some time to come. As Murphy notes, it is difficult to predict the effects because the length of part-time study is unknown.

There appear to be wide variations in enrollments of part-time and full-time master's students among regions. The South and the Midwest most closely approximate all-school totals for percentage change. The Northeast experienced the greatest decline in full-time enrollments, with a drop of 14.7 percent, as well as the smallest increase in part-time enrollments—9.5 percent. The West experienced dramatic increases in both full-time and part-time enrollments (see Table 4).

*Table 1. Types of Master's Degrees Awarded in NLN-Accredited Schools, 1984–85**

Type of Degree	Number
MS	57
MSN	54
MN	7
MA	2
MPH and MS	2
MA or MEd	1
MS or BS/MS	1
MSN and MS	1
MSN or MN	1
MNSc	1
MN and MS	1
Total	128

*Source: Master's Education in Nursing: Route to Opportunities in Contemporary Nursing 1984–85, New York: National League for Nursing, 1984.

To capture the diversity and categorize the variety of master's degree programs available, I surveyed NLN-accredited master's programs in early 1985. I asked 132 schools to indicate whether their programs were traditional only, traditional with nontraditional options, generic, or nontraditional. Eighty percent of those queried responded. Sixty-one percent were traditional; 36 percent were traditional with nontraditional options; 3 percent were generic; and none fit into the nontraditional category.

Within these classifications were models for outreach programs, summers-only programs, registered nurse (RN) to MS tracks; programs that admit non-nurses and foreign graduates; and programs for groups with special needs, such as technical nurse educators and nurse executives. I will describe some of the more striking innovations.

The Innovators

I define *generic* to mean any program that prepares students for entry into nursing practice. Therefore, master's degree programs that admit non-nurses are generic even if they provide both basic and advanced education. Yale University and the University of Tennessee at Knoxville are examples of this type of program.

The University of Tennessee at Knoxville offers a generic master's program that leads to the first and the second professional degrees for non-nurses with bachelor's degrees. It is also open to RNs who hold bachelor's degrees either in nursing or in a non-nursing field.

Yale University offers a three-year master's program in which non-nurses with bachelor's degrees acquire both basic and advanced preparation. Yale also offers a two-year master's program for RNs with either BSNs or bachelor's degrees in other majors.

Pace University also offers a generic master's program.

Among programs that admit RN students with non-nursing bachelor's degrees are Adelphi University, Case Western Reserve University, Pace University of Illinois, the University of Tennessee at Knoxville, and Wayne State University.

During 1984-85, Seton Hall began a special project whereby RNs who had earned non-nursing bachelor's degrees prior to 1979 could be admitted during a limited time period between September 1984 and March 1985. Admission criteria included professional accomplishments and activities as well as academic record. The school developed programs that lead to a graduate degree within three years of combined part- and full-time study.

In 1984, the University of Illinois College of Nursing's Department of Nursing Sciences started a five-year experimental plan whereby RNs with non-nursing bachelor's degrees may be admitted to graduate study in psychiatric-community mental health nursing. Admission is limited to one-third of the program's yearly admissions. In addition to the usual admission requirements, the program assesses applicants for competence in leadership and independent decision making by looking at whether they have successfully completed leadership courses; earned continuing education units for leadership workshops; worked as head nurses, team leaders, or supervisors; been promoted into leadership positions; and taken part in professional and community activities that require such leadership activites as giving presentations and being politically active.

At Case Western Reserve University, graduates of NLN-accredited associate degree and diploma programs may be admitted to the master's degree program. In addition to the usual admission requirements, applicants must have completed from 47 to 49 semester hours in liberal arts prerequisites with grades of B or better, passed the NLN Nursing Mobility Profile II examination, have a B average in the basic preparatory program, and have one or more years of experience as an RN.

The University of Massachusetts-Amherst has a pre-master's program for RNs who have met all of the criteria for admission to the graduate program but who have a non-nursing bachelor's degree. On the basis of portfolio analysis and NLN examinations, the program assesses whether individuals have met the terminal objectives of the undergraduate nursing program. If they have not, they may enroll in independent study or take specific courses. Students who lack proficiency in undergraduate research must enroll in a research course. Once they have attained undergraduate objectives, they may enter the master's program as regular students.

Pace University offers a specialty program that admits RNs with non-nursing bachelor's degrees and awards a master's degree as a second professional degree. Successful applicants have completed an NLN-accredited nursing program; completed an accredited baccalaureate program; shown satisfactory performance; been practicing nursing for at least three years; performed satisfactorily on validation exams; and achieved a grade of B in Matrices of Nursing. The program also considers applicants' motivation, leadership potential, and maturity.

The University of Iowa also has

*Table 2. Number of NLN-Accredited Master's Programs by Location, 1985**

Location	Number	Percent
New York	13	
California	8	
Illinois	8	
Texas	8	
Ohio	7	
Virginia	6	
Massachusetts	5	
North Carolina	5	
Pennsylvania	5	
Sub-Total	**65**	**49%**
Remaining 34 states, District of Columbia and Puerto Rico	67	51%
Total	**132**	**100%**

**Based on the number of programs accredited as of February 1985.*

multiple track options for RNs pursuing master's degrees. There are options for RNs with non-nursing bachelor's degrees, RNs with bachelor's degrees from other countries; graduates of accredited BSN programs, graduates of non-accredited BSN programs, and RNs with associate degrees or diplomas. In the latter option, students may substitute eight semester hours of graduate work for undergraduate coursework, but the credit requirements for the master's degree remain the same.

"Articulation" programs provide a direct route to master's degrees for RNs who have graduated from diploma or associate degree programs. The programs award baccalaureate degrees along the way. Both Adelphi University and the University of Rochester have developed such programs.

Adelphi University has an accelerated baccalaureate/master's honors program for RNs. The honors program requires higher admission criteria, which include a grade point average of 3.5 or higher, one year of work experience, a letter of recommendation from the applicant's employer, and a commitment to earning a master's degree. Substituting master's-level courses in statistics, research, and professional issues for undergraduate courses, as well as other master's-level courses for undergraduate electives in the RN curriculum, shortens the baccalaureate program by one year. The master's program requires 48 credits. Adelphi also admits RNs with non-nursing bachelor's degrees, who may earn 30 undergraduate credits by proficiency examination. They are admitted to the master's program after they have earned 30 additional credits; they are awarded a BSN when they have completed 126 credits and a master's degree when they have completed 20 more. Graduates of associate degree programs may apply up to 64 credits toward a BS degree. In the BS/MS accelerated program, they take another 35 undergraduate credits and then enroll in master's-level courses. After they have completed 30 credits of master's-level courses and a total of 126 credits, they are awarded a BSN. They have to complete an additional 18 credits for an MSN.

In 1986, the University of Rochester began a BS/MS program for clinically experienced RNs committed to earning master's degrees. The program requires 64 credits of prerequisites and 30 nursing credits by proficiency examination for admission. It also requires a minimum score of 1000 for verbal and quantitative skills on the Graduate Record Examination (GRE). Students enroll in master's skills courses as the fourth year of the bachelor's program and are awarded a BS after completing 128 credits. At the end of the fifth calendar year of full-time study, the program awards an MS. The BS/MS program is designed to be completed in two calendar years if the student has met the prerequisites.

Twenty of the programs I surveyed indicated that they offer off-campus classes or outreach programs. Indiana University uses a telecommunication system to deliver core courses of didactic offerings by television. The University of South Carolina delivers core courses in theory, research, and issues in a statewide, talk-back television format at 27 sites. Other innovations include offering courses on weekends, using off-campus clinical mentors, offering workshops for credit, and rotating sites. Distances traveled vary but range up to 400 miles.

Other Models

Among the other innovative options mentioned were summers-only programs, on-campus weekend programs, and dual degree programs.

Emory University offers a dual degree program that leads to master's of nursing and master's of public health degrees. Students can meet requirements for this program, which is offered by the schools of nursing and medicine, by adding one semester to the nursing program.

Teachers College/Columbia University offers a master's program through the Graduate School of Business and the Department of Nursing Education that is designed for working nurse executives who cannot attend school full-time. All of the program's classes are held on Fridays; a BSN is not required for admission; the program faculty view participants as resources to the program; each class proceeds through the program as a cohort group; and the summer is used as a semester. After completing the four-semester program, graduates are awarded master's of arts degrees in the Nursing Organization Executive Role.

The University of Tennessee-Knoxville started a new nontraditional MSN program for technical nurse educators in June 1984. With funding from a W. K. Kellogg grant, the school offered the program at four outreach locations in an intensive Friday or Saturday seminar format during each academic quarter. Program sites were Chattanooga, Cookeville, and Kingsport, Tennessee, and Lexington, Kentucky. During the summer of 1985, clinical courses were offered for the first time on the Knoxville campus. Ordinarily, it takes two calendar years to complete the program.

*Table 3. Regional Distribution of NLN-Accredited Master's Programs in Nursing, 1974–75 and 1984–85**

Region # 1 — North Atlantic	1974/75	84/85	% Change
Connecticut	1	2	
Delaware	1	1	
District of Columbia	1	2	
Maine			
Massachusetts	3	5	
New Hampshire			
New Jersey	1	2	
New York	9	13	
Pennsylvania	2	5	
Rhode Island		1	
Vermont			
	18	31	172%

Region #2 — Midwest	1974/75	84/85	% Change
Illinois	3	8	
Indiana	1	3	
Iowa	1	1	
Kansas	1	2	
Michigan	2	3	
Minnesota	2	2	
Missouri	2	3	
Nebraska	1	1	
North Dakota			
Ohio	3	7	
South Dakota			
Wisconsin	2	4	
	18	35	194%

Region #3 — Southern	1974/75	84/85	% Change
Alabama	1	3	
Arkansas	1	2	
Florida	1	3	
Georgia	2	3	
Kentucky	1	1	
Louisiana		2	
Maryland	1	1	
Mississippi		3	
North Carolina	2	5	
Oklahoma	1	2	
Puerto Rico	1	1	
South Carolina		2	
Tennessee	1	3	
Texas	2	8	
Virginia	2	6	
West Virginia		1	
	16	46	287%

Region #4 — Western	1974/75	84/85	% Change
Alaska			
Arizona	2	2	
California	5	8	
Colorado	1	1	
Hawaii	1	1	
Idaho		1	
Montana	1	1	
Nevada			
New Mexico		1	
Oregon	1	2	
Utah	1	2	
Washington	1	1	
Wyoming			
	13	20	153%

The regions as outlined above are NLN-designated regions. The majority of programs are located in the Southern and Midwest regions, which also show the greatest percentage increases in number of programs.

**Adapted from Lodge, Mary P., Facts and Reflections About Master's Education in Nursing in the United States. New York: National League for Nursing, 1975.*

The University of Portland reports a high rate of success with their summers-only master's program, which is taught over three summers. Students complete coursework at their home institutions during the regular academic year. The program began in 1977; 200 students have graduated, and only one student has failed to finish.

These innovative programs challenge traditional thinking about how schools can offer master's degree programs. They challenge our ideas that students must enroll full-time, that there must be an on-campus residency requirement, that students must have bachelor's degrees in nursing, that classes must be offered within five-day week, daytime format, and that students must be graduates of NLN-accredited baccalaureate programs.

Future Considerations

Changes in society, the environment, the profession, and the health care system have implications for changes in graduate education:

Population trends:

- The proportions of black and Hispanic individuals in our population are increasing dramatically. For example, according to the American Council on Education, "California now has a minority majority in its elementary schools, while Texas public schools are 46 percent nonwhite [7]."
- The 65-year and older age group is growing rapidly.
- There will be fewer college-bound individuals in the 18- to 22-year-old group at least through the early 1990s.

Social changes:

- On the negative side, among young persons, drug and alcohol dependency

problems and suicides are going up; child abuse appears to be on the increase; and the number of persons who are homeless is growing.

- On the positive side, the general population is more interested than ever before in self-help, health promotion, and wellness.
- We have entered the postindustrial age and are facing such attendant changes as electronic communication, the use of robots to replace human workers, and genetic engineering.

Environmental changes:

- There are mounting numbers of more and more complex pollutants in our air, water, and food supplies, and in our soil.

Professional changes:

- Due to the professional entry level position, more RNs are seeking baccalaureate and higher degrees.
- As doctorates become *de riguer* for teaching in university programs and in health service agencies, there will be greater numbers of master's-prepared nurses seeking doctoral degrees.
- Part-time enrollment in graduate programs will continue to be greater than full-time because of pressing needs to work while in school.

Health care delivery changes:

- Greater acuity in hospitals will continue and demand for highly trained, competent clinicians will increase.
- Shorter hospital stays will result in more intensive need for home care.
- Among the services nurses will provide will be health promotion outside of acute-care facilities.

In her keynote address to the Midwest Alliance in Nursing in April 1985, Gloria Smith called for "blended credentials," such as a BSN and an MPH. She suggested that we encourage this educational mix while helping nurses retain their identity and loyalty to the profession, rather than treating them as tainted, as we've done in the past. She also said we have to draw on the experts to teach such subjects as business, economics, and the behavioral and social sciences rather than giving students a "digest" taught by nurses.

What will be the relationship between nursing and medicine amid these changes? I think it will be increasingly confrontational as the two professions vie for clients and vie for the opportunity to deliver services. Nursing leaders must be equipped with skills in both assertiveness and in team-building to meet these challenges.

Medical education is preparing for the future. In the Association of American Medical Colleges' report on *Physicians for the Twenty-First Century*, the study project panel listed "continuing pressures" that demand accommodation for the medical profession to survive [8]. These pressures include rapid advances in biomedical knowledge and technology; proliferation of chemical, electronic, and mechanical technologies that require medical practice to become even more specialized; recognition that life-style, environment, and poverty are more important in determining health and illness than are medical interventions; increasing public demand for services to improve health; employment of physicians by large corporations; and ethical dilemmas that will intensify as financial and medical incentives become less and less congruent.

Hechenberger has urged the nursing profession not to "simply fall into the twenty-first century," but to enter it in a planned and organized manner [9]. New roles are being shaped in the context of social, political, and cultural changes. Powerful forces in government, in the health care industry, and in health-related disciplines are at work. For the nursing profession to remain viable and to seize the opportunities that are emerging, we must empower our graduates to meet these challenges. We have a large task ahead. I am confident we will prevail.

Table 4. AACN Enrollment Data on Master's Programs, 1984–85*

Region	Number of Schools	Number of Students	Annual Change Students
United States			
Full-Time	146	6,047	−2.8%
Part-Time	157	13,039	15.2%
Northeast			
Full-Time	33	1,652	−14.7%
Part-Time	40	4,617	9.5%
Midwest			
Full-Time	43	1,313	−2.0%
Part-Time	45	3,738	12.0%
South			
Full-Time	48	1,809	−2.5%
Part-Time	50	3,470	15.7%
West			
Full-Time	22	1,273	16.5%
Part-Time	22	1,214	57.7%

**Source: Murphy, M. I.*, Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing, Four Years, 1981–1985, *Washington, D.C.: American Association of Colleges of Nursing, 1985.*

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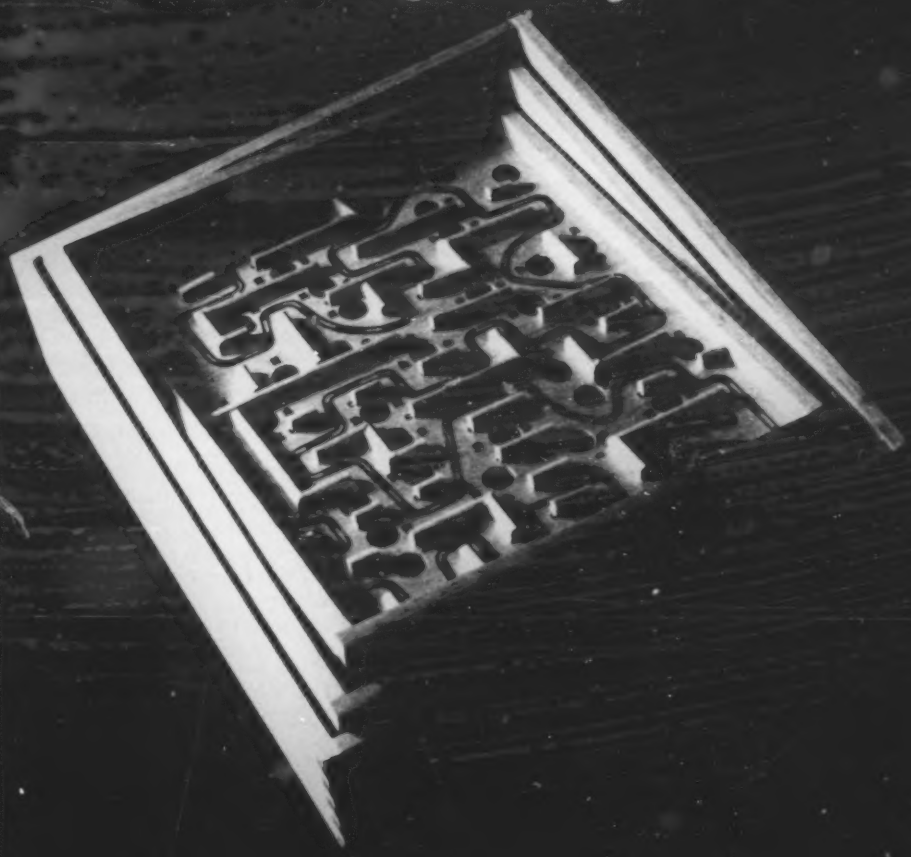
Paths to Quality



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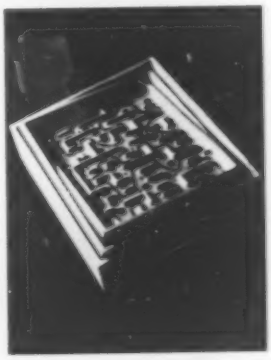

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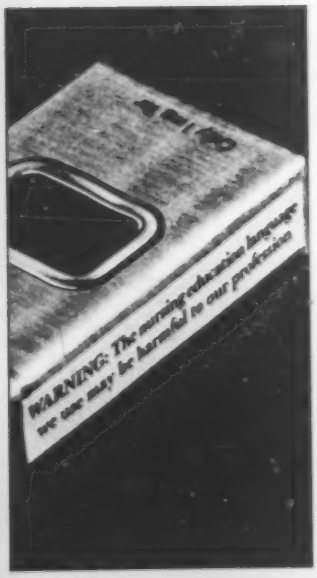

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Weighing the Costs and the Benefits of Student Education to Service Agencies

PATTY L. HAWKEN
E. ANN HILLESTAD

In the not-so-distant past, hospitals had waiting lists of nurses seeking employment. They also had decreased financial resources as a result of prospective payment and fewer patient days. Hospital administrators were looking for added sources of revenue. With full nursing staffs, some hospital administrators determined that accommodating nursing students was costly, and they considered charging schools of nursing for placing students in their institutions for patient-care experience. The basis of this charge would be from a perceived cost to the institution, not from documented findings.

During this same period of time, nursing school administrators were experiencing a decrease in fiscal resources to accomplish their educational mission and were unwilling or unable to reimburse service agencies for student clinical experience. However, nurse educators did not have data to indicate the cost-to-benefit ratio of their services to the service institutions—and to justify their unwillingness to reimburse service agencies.

The question was then raised regarding equity in the exchange of nursing student services in addition to paying for the privilege of giving these services. Specifically, is there an equitable exchange of resources between nursing education programs and service agencies that cooperate in educating nursing students?

To answer this question, we devised a cost-to-benefit analysis study to determine both the costs incurred and the benefits contributed by baccalaureate and master's students who care for patients. We determined that the student, the school, the nursing staff, and the hospital contribute two types of activities and benefits. The first are tangible activities such as providing physical care for patients, recording information on charts, and talking with families, all of which the students contribute. Tangible items that the hospital and the nursing staff contribute include time for orientation, answering questions, and the use of conference space. The intangible benefits resulting from having students in the hospital include the opportunity to recruit them after they graduate and the prestige that being associated with a university provides. The intangible contributions the hospital makes to the school include staff nurse expertise, interaction with physicians and other hospital personnel, and feedback and evaluation from hospital personnel.

The specific questions addressed in this study were:

- What are the tangible and intangible resources exchanged between baccalaureate and higher degree schools of nursing and service agencies?
- Is the exchange of these resources between the two organizations equitable?

Many early articles dealt with the cost of hospital-based schools of nursing [1–6]. These authors highlighted program costs, tuition, and room and board costs, and compared them against a beginning staff nurse salary. Some researchers found that clinical student nurses were costly to hospitals. Others indicated student nurses were cost effective and a benefit to hospitals.

More recently, authors have discussed the need for cost analysis of nursing student experience [7–8]. None of them have addressed the costs incurred or benefits accrued as a result of the clinical experience of students. No one has documented the intangible benefits of clinical nursing experience. The need for a cost-to-benefit analysis of nursing student education to service agencies was evident.

We based the study on the Resource-Exchange paradigm explained by Walter Nord [9]. The paradigm is based on the idea that social interactions are the fundamental aspects of resource exchange. The exchange occurs between individuals, individuals and groups, individuals and organizations, groups and organizations, and between organizations. In exchanges between organizations, the resources involved are those that help them achieve their goals. The relationship

Patty Hawken, PhD, RN, is dean and professor at The University of Texas Health Science Center at San Antonio School of Nursing. Ann Hillestad, PhD, RN, is an assistant professor there and a former nursing service administrator. Special thanks to Sara Draper, MSN, RN, research associate, who participated in data collection.

Table 1. Importance of Tangible Resources — in School of Nursing and Clinical Facility. Number of Staff/Faculty Responding in Each Category

Tangible Resources	School of Nursing Minimally Important	Somewhat Important	Moderately Imporant	Important	Very Important
Physical care	–	–	–	4	9
Patient education	–	–	–	1	12
Emotional support					
Patient	–	–	–	3	10
Family	–	–	1	5	7
Patient conferences	–	–	5	6	2
Specific topic conferences	–	–	7	6	–
Resource materials*	1	3	4	3	1
Health science center resources	2	1	7	2	1
Consultation/inservice	2	–	2	8	1

Tangible Resources	Clinical Facility Minimally Important	Somewhat Important	Moderately Important	Important	Very Important
Head nurse/clinical nurse specialist time	1	–	1	3	8
Staff time	–	–	–	–	13
Supplies	1	1	3	3	5
Equipment	5	2	2	1	3
Unit space	–	1	1	5	6
Facility space	–	2	1	5	5
Resource materials*	–	1	3	5	3
In service	–	4	3	2	4
Miscellaneous	2	2	3	5	1

*One person did not answer

between organizations is balanced and satisfactory to both when each are receiving those resources they value in a quantity they judge appropriate. For the organizations to survive and grow, equilibrium between the resources needed and obtained and those dispersed must be achieved. If members of either group think there is disequilibrium, they may try to alter the relationship.

The costs and benefits can be viewed as resources that the service agency and the nursing school need, and the other agency has. The relationship between the two organizations is satisfactory to both when each sees that the exchange is equitable.

We designed the study to first determine the tangible and intangible items that were exchanged by the school of nursing and the hospitals. We defined tangible items as resources that could be appraised in terms of actual or potential value. Four-by-four gauze dressings are examples of tangible items. Intangible resources included those that are nonmaterial or nonphysical, such as good will.

First we had to develop a list of all tangible and intangible resources with the help of nurses familiar with nursing care in institutions and nurses working with students. We would use the list of tangible resources as a basis for directly observing students in the hospital to determine if they used these resources. Since intangible resources cannot be observed, we decided to compile a questionnaire regarding intangible resources to send to faculty members, staff nurses, directors of nursing, and hospital administrators.

The school of nursing involved in the study is a publicly supported school in a health science center. It enrolls undergraduate students in their junior year, students with nursing backgrounds, and nurses with diplomas or associate degrees. The school also has a master's in nursing program. The hospitals involved were a large veteran's hospital, a military hospital, a county hospital, and two for-profit hospitals.

The initial step in designing a questionnaire was to compile a list of tangible and intangible resources. We interviewed three head nurses and three faculty members. The head nurses were from three different hospitals and three different services—intensive care, surgical, and maternity. The three faculty members were from the school of nursing and were teaching three levels of students—graduate, beginning undergraduate, and graduating seniors. The faculty members' specialty areas were medical, gerontology, and intensive care.

On the questionnaire, we briefly explained the purpose of the interview and the concepts of tangible and intangible resources, and we asked these questions:

- What do you believe are the tangible and intangible benefits of having students on a patient care unit?
- What do you believe is the cost of having students on a patient care unit?
- What are the benefits of having faculty on a patient care unit?

From the responses, we developed lists of tangible and intangible resources potentially involved in the resource exchange.

Next we sent the lists of tangible and intangible resources to a group of hospital nurses and a group of faculty members. The hospital staff nurses had been with the students during the 1986 spring semester and the faculty members had supervised students in clinical settings during the spring semester but would not be doing so in the subsequent semester. We chose these individuals to help refine the lists of items; they would not be the individuals we would observe with students later. We mailed 32 questionnaires; 15 were returned and 13 were usable. We had asked the faculty members and the staff nurses to add items to both the lists, to mark items they believed should be omitted, and to rank the items.

Analysis of the results indicated that none of the items on either list should be omitted (see Tables 1 and 2). Each item was further defined. For instance, physical care was defined as physical care of patients that necessitated such "hands-on care" as bathing, providing wound care, and taking vital signs. The area of documentation was added to the tangible resource list for the school of nursing. Documentation was a broad category that included charting and completing forms. This was the only item added to the lists.

Before collecting any data, we received permission from the nursing administrators of each of the five institutions we had selected. We also obtained the approval of the university's Institutional Review Board.

To determine the exchange of tangible resources, we hired a research associate to observe students during their clinical practice time. The observations were limited to five medical-surgical courses offered in the fall of 1986. Two courses were in the graduate program, one was offered for junior-year baccalaureate students, one for graduating seniors, and one for nurses in our baccalaureate completion program. We decided to restrict observations to medical-surgical areas since other clinical areas provided vastly different experiences.

We selected the sample by using a table of random numbers. Two medical-surgical faculty members and six students were randomly selected from the junior year, senior year, completion program, and graduate nursing courses. Each faculty member and student was given the option to choose whether or not to participate and anonymity in reporting data was assured.

The research associate observed every student and faculty member for 10 minutes every hour during two six- or eight-hour days. She divided the courses so she was observing one faculty member and three students every hour each day. She noted on a prepared form exactly what each person

Table 2. Importance of Intangible Resources in School of Nursing and Clinical Facility. Number of Staff/Faculty Responding in Each Category

Intangible Resources	School of Nursing: Minimally Important	Somewhat Important	Moderately Important	Important	Very Important
Prestige*	2	4	4	2	–
Recruitment (Others)	1	2	6	4	–
Recruitment pool (Students)	–	2	5	5	1
Job enrichment	–	–	2	7	4
Maintaining nursing skills	–	–	1	2	10
Encourages analysis of care	–	1	–	1	11
Stimulates continued learning	–	–	1	3	9

Intangible Resources	Clinical Facility: Minimally Important	Somewhat Important	Moderately Important	Important	Very Important
Provide nursing care	–	–	–	–	12
Staff knowledge and skill*	–	–	–	–	12
Interaction with physicians*	–	–	1	4	7
Interaction with personnel*	–	–	–	5	7
Evaluation and feedback*	–	–	1	5	6
Organizational experience*	–	1	2	4	5
Potential students*	2	–	7	2	1

*One person did not answer

was doing, what supplies were used, which staff members were involved, and the general conversation taking place. She also noted the exact number of minutes for every activity.

We did a pilot study to ascertain the feasibility of the data gathering procedure—whether or not we could find participants, note supplies, and capture conversations. One of us and the research associate observed students and faculty members who were not in the main project for two full clinical days. We achieved consensual validation and decided to make very specific notations. For instance, instead of saying "dressing changed," the researcher listed the actual number and amount of supplies.

The research associate reported few problems during the observation stage. Several students appeared anxious about being observed initially but soon became absorbed in their learning activites and accepted the observer as part of the environment.

We compiled a questionnaire of intangible resources. There were two lists of those—one contributed by the school and one by the hospital. We included a five-point Likert response scale as well as a demographic sheet and mailed the questionnaires to the hospital administrators and nursing service directors of the five hospitals used. We also gave questionnaires to the staff nurses on the units where students were obtaining their clinical experience and to the faculty members who were working with students.

Results of the intangible resources exchanged is in final analysis and will be reported in the May issue of *Nursing & Health Care*.

We placed the observations of tangible resources in the appropriate category on the list of tangible resources and recorded them in minutes. We then costed out the total number of minutes for each category to yield the dollar value of the resources used in each category and in each course. We determined costs by using the actual cost of supplies. We used the average salary for a licensed vocational nurse to calculate the cost of the junior year students' contributions; we equated senior year and completion students' contributions to a beginning staff nurse salary; and we determined graduate nursing

Table 3. Tangible Resources for Hospital and School of Nursing

Hospital

	Undergraduate		Degree	Graduate		
	Sem. I	Sem. IV	Completion	M.S. I	C.C. III	Total
Students/Faculty	84/11	62/8	21/3	7/2	7/2	–
Resources						
Head nurse/Clinical nurse specialist time	$ 531	$ 1,898	$1,123	$ 520	$1,587	$ 5,659
Staff time						
RN	4,398	7,496	204	622	124	12,844
LVN/LPN	668	138	50	–	–	856
Nurses aide	–	–	5	–	–	5
Unit secretary	–	45	26	8	–	79
Supplies	1,035	139	11	–	–	1,185
Space	5,513	2,916	410	–	–	8,839
Miscellaneous	235		94			329
Total costs	$12,380	$12,632	$1,923	$1,150	$1,711	$29,796

School

	Undergraduate		Degree	Graduate		
	Sem. I	Sem. IV	Completion	M.S. I	C.C. III	Total
Students/Faculty	84/11	62/8	21/3	7/2	7/2	–
Resources						
Physical care	$24,652	$24,125	$2,190	$359	$236	$51,562
Patient education	2,706	1,717	220	123	–	4,766
Emotional support						
patient	839	478	41	–	–	1,358
family	411	64	41	–	50	566
Documentation	4,159	5,363	513	96	–	10,131
Conferences	–	–	–	137	–	137
Total costs	$32,767	$31,747	$3,005	$715	$286	$68,520

students' contributions by using the average of experienced staff nurse salaries. We costed out hospital staff time using the local average salary for each staff nurse level.

We costed out space by dividing space into unit space and facility space. We defined unit space as unscheduled space used as coffee rooms or conference rooms available for general use. Facility space referred to scheduled classroom or conference areas. We only costed out facility space. Post-clinical conferences were held in facility space. The monetary value associated with facility space was an average of the amounts charged by three for-profit facilities for the use of their conference rooms and three non-profit facilities for the amount calculated as their contribution to the community when outside groups used the space.

We did not cost out the use of the health science center library by hospital staff or the use of printed or written resource materials belonging to the hospital and used by many people, such as patients' hospital records used for data gathering and procedure and reference books.

The research associate did not observe all of the items on the tangible lists being used. For instance, she did not observe faculty engaged in consultation activities. The monetary value of each category observed was calculated and the value for all students and faculty in the five medical-surgical courses was extrapolated (see Table 3).

Results

The results of this project indicate that the nursing school contributes more than twice as much of tangible resources to the exchange as the clinical facilities contribute. The research associate observed an actual total of 855.5 minutes of "hands-on" patient care; extended to all 181 students in the five medical-surgical courses for the semester, this figure becomes over 4,700 hours of care. Although the hospital staff retains responsibility for patients' care and students are not there to staff, these hours of care make a valuable contribution, especially in light of a nursing shortage. In three of the courses in this study, the students spent six hours per day performing clinical activities, and in the other two courses they spent eight hours per day doing clinical work. Those are sizable blocks of time during which staff could be allowed time to provide more comprehensive care, to participate in staff development activities, or to take part in such departmental activities as quality assurance.

The question of whether or not students use more supplies than experienced staff has long been an issue between nursing service and education. The results of this project indicate that they use a small number of additional supplies, but the cost of the extra supplies observed being used in the study extended to all 181 students in the five medical-surgical courses throughout the semester was less than $1,200.

Graduate students contributed a smaller proportion and consumed a larger proportion of resources than undergraduate students and faculty members. Although students in the two graduate courses represented only 8.7 percent of the total number of students in the five courses and their clinical time was only 5.8 percent of the total, they consumed 32 percent of the staff time, mostly in the head nurse/clinical nurse specialist category. Graduate students talked with head nurses to gather data for projects and to discuss implementation of activities. The monetary value of their contributions to the exchange of resources was only 1.5 percent of the total contribution made by the school; they used 9.6 percent of the contribution made by the hospitals.

It may be that this method of observing the exchange of tangible resources involving graduate students is not appropriate. Their course objectives are not met by providing "hands-on" care and the majority of their contributions are made by completing and presenting projects useful to the clinical units and their staff. That part of the exchange would only be observed in the closing weeks of the semester and was not observed in this study. One faculty member who, along with others, had supervised 15 students in a graduate medical-surgical course costed out the value of their products from the viewpoint of providing consultation to the units and staff and projected a value of $10,000, just for the time involved in consulting and presenting findings of their projects.

This study indicated the school of nursing contributes more than twice as much in relation to tangible resources as the hospital. This is only as it relates to five courses focusing on medical-surgical nursing. The study also demonstrated that nursing students use only a small amount of additional supplies. In fact, given the same circumstances, staff nurses might have used similar amounts. The study further indicated that graduate-student contributions should be calculated on a different basis. Using consultation costs seems to be a clearer reflection of activity.

Plans

Future plans include analyzing the intangible resources and reporting the findings in the next issue of *Nursing & Health Care*. Additional studies should be done in other clinical areas in the hospital as well as replication of the present study. The model used should be refined and replicated.

Cost-to-benefit analysis studies are helpful to administrators to clearly determine costs incurred and received in relation to nursing student education. The present study clearly indicates a significant contribution of nursing students to the health care facilities and patients.

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Sampling Nursing Time Pinpoints Staffing Needs

TERRY R. MISENER
A.J. FRELIN
PATRICIA A. TWIST

Today as never before, nurses are under the gun to document resource expenditures, particularly personnel requirements. Economic belt-tightening has heightened the pressure that hospitals have always exerted on nursing departments to justify spending. Nurse managers can no longer appeal to administrators with subjective cries about patients' needs. We must have hard data with which to enter the combat arena of resource allocation. If we need more nursing resources to provide safe, high-quality patient care, we must be able to document those requirements with data gathered using sound methods based on valid and reliable measurement tools.

Because the Army Nurse Corps (ANC) was convinced that the patient classification system and patient census they were using were inadequate for determining staffing needs, we decided to study precisely how nursing personnel in army facilities spent their time. We began by looking into the work others had done in this area.

In 1981, Sherrod and her colleagues undertook an extensive study to measure direct nursing care requirements objectively. They documented how much time all levels of nursing personnel needed to perform 357 nursing tasks [1]. They defined direct patient care as "All care given by nursing personnel in the presence of patients; those nursing activities that are carried out with or without the patient, are behavioral in nature, and are observable [2]." Based on the results of the study, Sherrod developed and translated standard times into a patient classification system for six major inpatient clinical areas: medical-surgical, intensive care, psychiatry, obstetrics, pediatrics, and neonatal units. Giovanetti has credited Sherrod with developing the most comprehensive and best documented task list [3]. In addition to the patient classification system, Sherrod developed staffing-mix ratios for each nursing area that reflect the levels of personnel actually observed providing direct patient care. Sherrod studied only direct patient care requirements, but she realized that a comprehensive staffing system required quantifying indirect care requirements and times that nursing personnel were unavailable to render patient care.

In 1982, Lake used work sampling to document the percentages of time spent in nursing activities in community hospitals [4]. He reported that nursing personnel spent between 28 and 35 percent of their time providing direct patient care and between 50 and 62 percent of their time doing indirect care. His subjects were involved in personal activities or unavailable between 10 and 15 percent of the time. Lake broke indirect care into an indirect care category, which included charting, communicating about patients, preparing medications, and transcribing orders, and into a unit-related category, which included housekeeping, clerical work, communicating with others, doing errands, attending meetings, and acquiring supplies.

Veterans Administration (VA) researchers reported in 1983 that nursing personnel working in medical-surgical units spent between 38 and 45 percent of their time providing direct care and between 37 and 49 percent of their time on indirect care. Between 13 and 18 percent of their time was personal time [5]. The VA investigators counted time waiting to provide care under personal time, which we considered a misclassification.

Because of the differences in definitions used by Lake and the VA vis-a-vis the Sherrod study, the ANC decided to gather data about indirect care and unavailable-for-care times in our own settings. We defined indirect care activities as those tasks performed away

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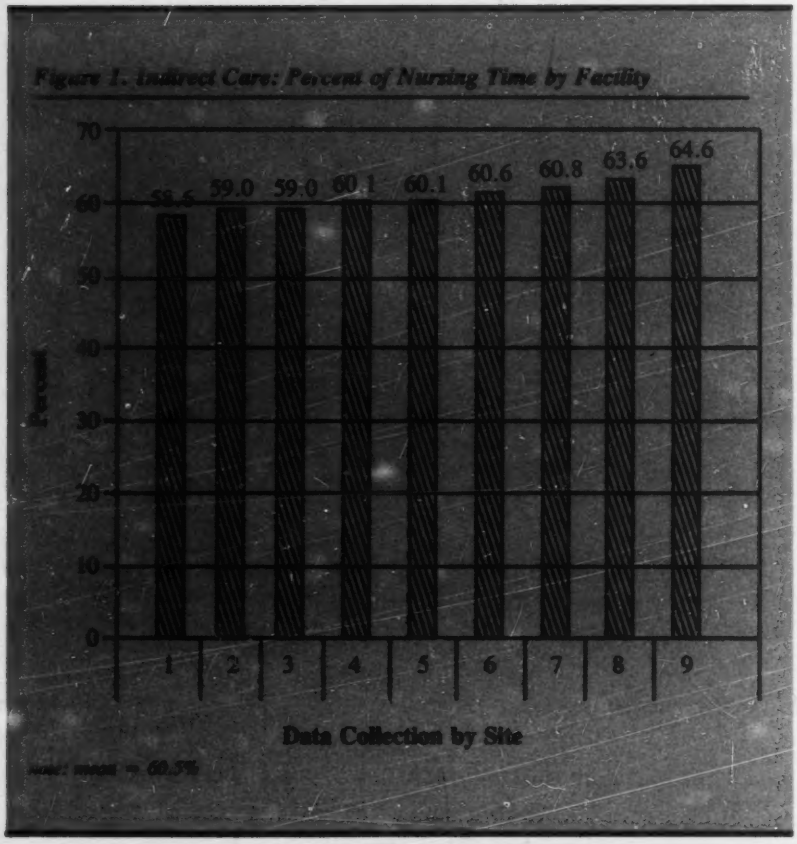
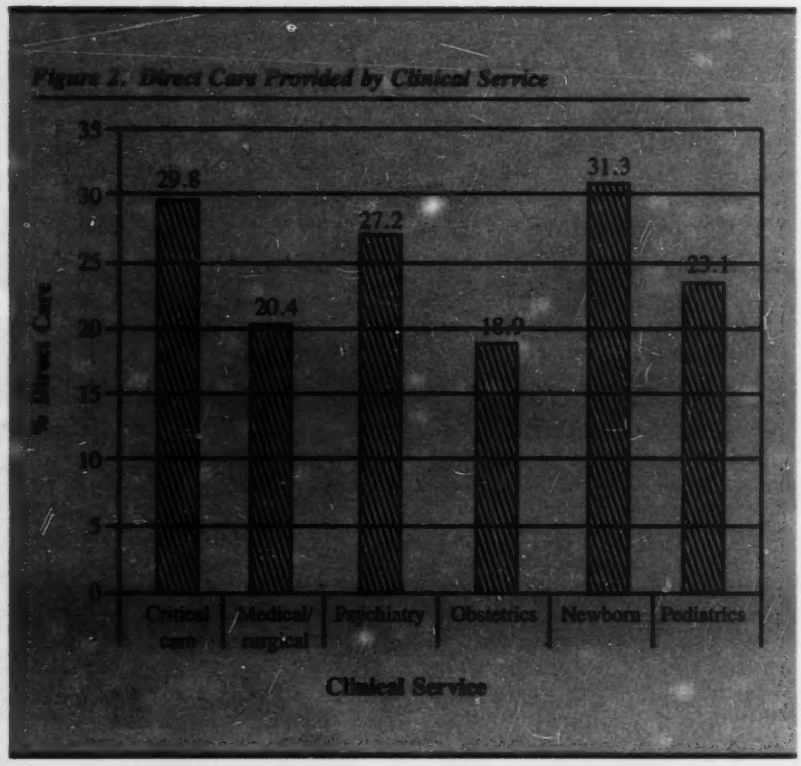




from the patient, and we divided them into the following eight subcategories: communications including patient conferences; assessing patients' needs and planning their care; preparing medications, supplies and equipment; travel and transportation; ward administration; housekeeping; and waiting time. Unavailable-for-care times included those activities not directed toward patient care or unit management that detract from time available for patient care. We divided the unavailable-for-care category into an on-the-unit activity component and an off-the-unit activity component. Many off-the-unit activities were unique to the military, such as field training exercises and participating in parades.

Our objectives for the study were to determine the percentage of time hospital nursing personnel spent providing direct care and doing indirect care, as well as the percentage of time they were unavailable for care; to compare the percentage of time nursing personnel in all of the facilities we surveyed spent on the activities in each category; and to compare the time various types of nursing personnel spent on the activities in each category within and among facilities.

We chose nine study sites within the U.S. Army Health Services Command that provided a representative mix of medical treatment facilities by size, nursing unit configuration, and the type of military post supported. The chiefs of the nursing departments at each facility provided us with lists of all inpatient nursing units divided into the six clinical services of interest, points of contact, and the names of between two and seven nurses whom we would train to collect data at their sites.

Our basic method for collecting data was work sampling, which entails collecting data at predetermined intervals, then, based on sampling theory, extrapolating the findings over the entire monitored period of time [6]. We modified the U.S. Public Health Service Division of Nursing "San Joaquin Study" to develop a data collection tool [7]. The modifications included changing the working definitions and expanding the off-the-unit and unavailable-for-care activities to be more responsive to Army practices and needs. We pilot tested data collection forms at one large Army medical center to check validity and assure that our def-

Figure 3. Indirect Care Provided by Clinical Service

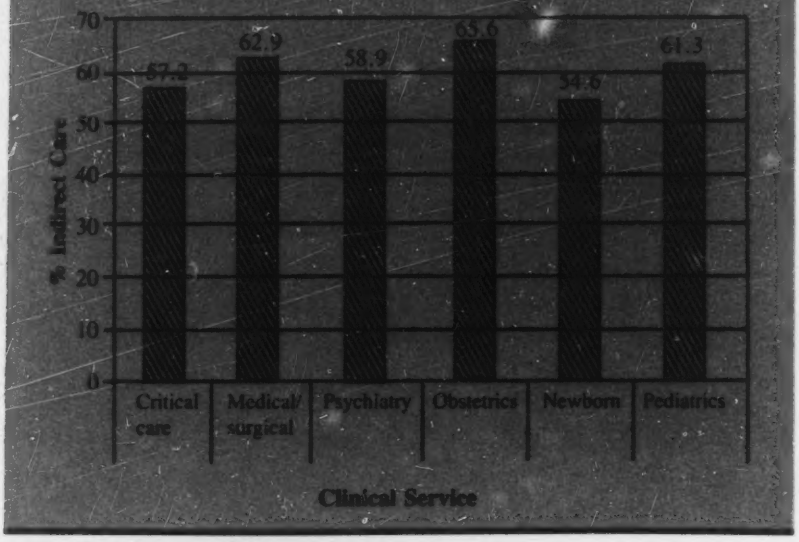


Figure 4. Unavailable for Care by Clinical Service

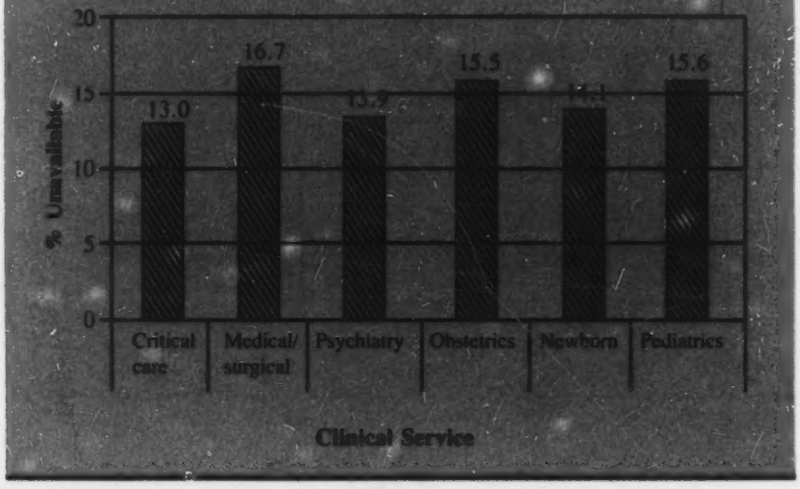


Table 1. Mean Percentage for all Shifts and Services by Shifts

Type of Care	Day	Evening	Night	Composite
Direct	22.1	30.3	26.1	24.5
Indirect	59.9	56.9	69.8	60.5
Unavailable for care	17.9	12.8	4.1	15.0

initions encompassed all of the nursing tasks and time allocations. The pilot test also gave us an opportunity to carry out interrater reliability measurements. To insure ease of use and clear definitions, we made minor modifications in the instrument.

To maximize scientific rigor, we used a civilian consultant with knowledge and experience in training and carrying out a work sampling study to review the protocol and to train study staff in the method. We and the consultant trained the data collectors at their own facilities. As a part of the didactic orientation, we gave data collectors two written tests to increase reliability in the classification of activities. Further training included two periods on a typical nursing unit, allowing data collectors to become familiar with the instrument and to insure virtually 100 percent interrater reliability.

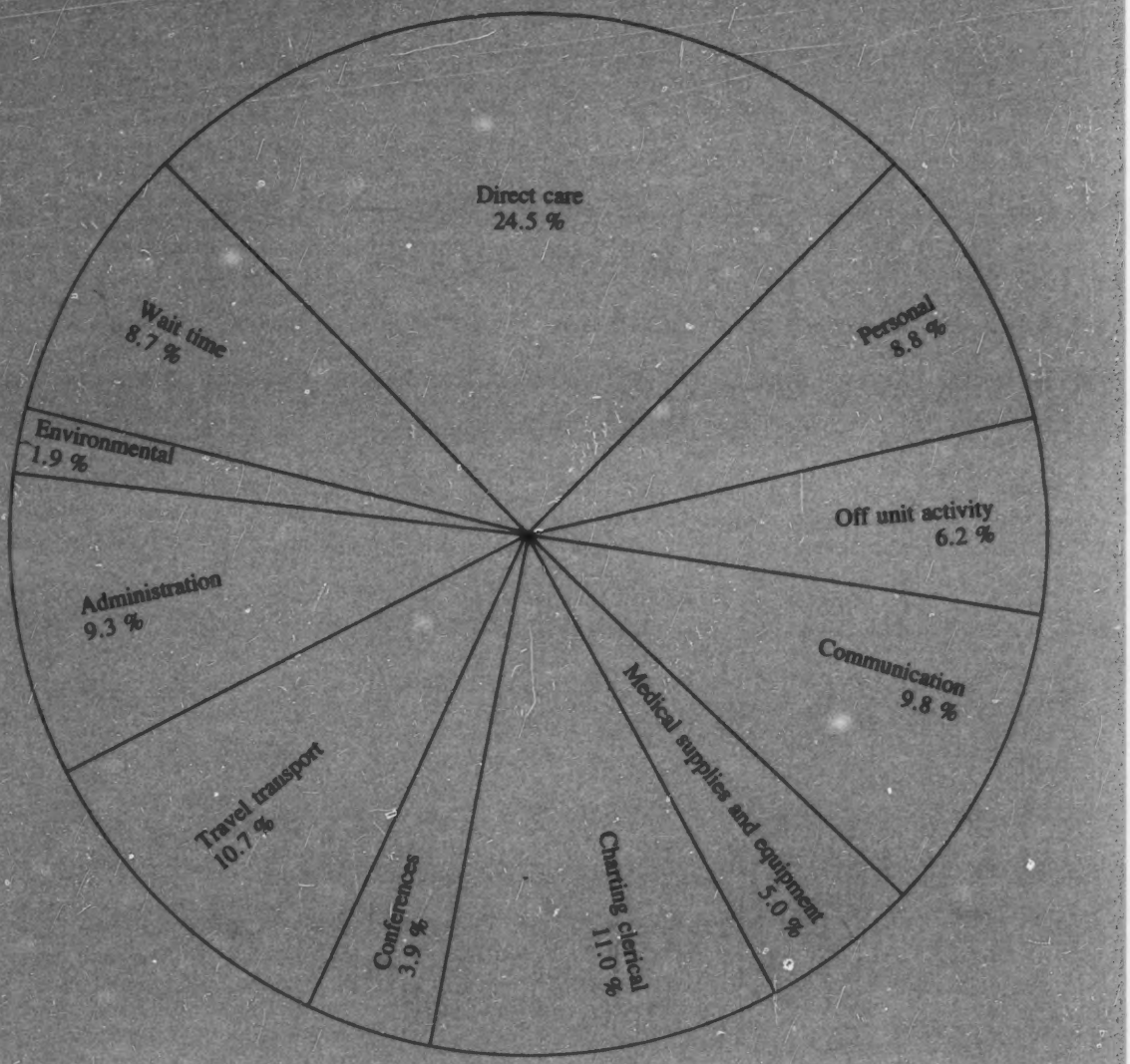
Using a table of random numbers, we selected nursing units from within each clinical service at each site in which to collect data. We assigned data collectors to gather data on randomly selected days and shifts for two weeks on ten, eight-hour shifts for each of the six services, randomly selecting five days, three evenings, and two nights.

The data collectors recorded the time nurses spent in each of 11 activity categories at 10-minute intervals during the eight-hour shifts. They documented the first task they observed the monitored person performing. During training, we taught the data collectors to begin monitoring at random points on the nursing unit, travel on varied routes, and begin their observations at random times for each observed segment. Although reactivity was a potential threat, we assured personnel that we would not evaluate them individually when we aggregated data. Staff members quickly adjusted to the observers, who did not feel that behaviors changed because of their observations.

The observers completed a single data collection form each hour on each of the observed nursing units. At the end of the data collection period, they forwarded their forms to the study office along with a time schedule for the assigned personnel on each nursing unit observed.

We collected all of the data during two months. The work sampling provided 107,700 10-minute segments of

Figure 5. Percentage of Time Spent by Nursing Personnel in 11 Activities Across Facilities



monitored time equating to 461 eight-hour shifts or 17,817 hours of nursing time across all nine study sites.

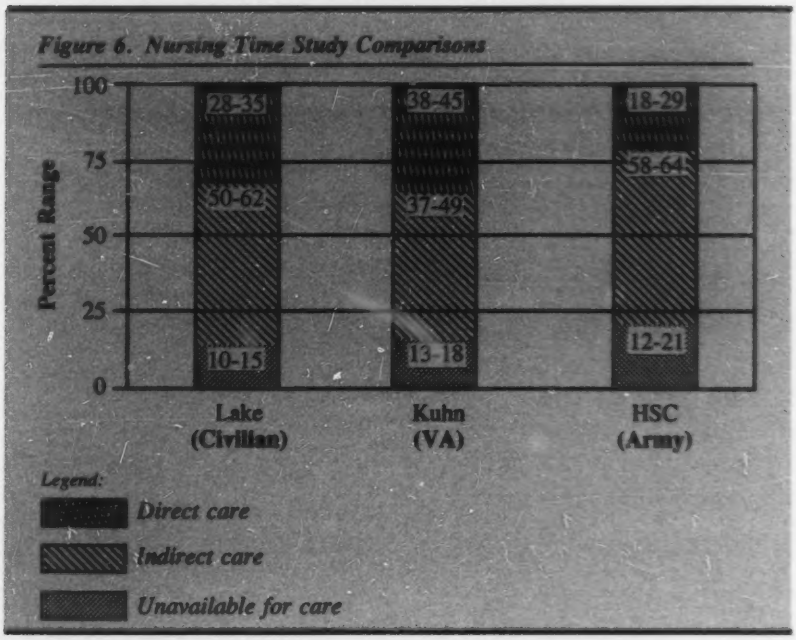
The observers collected 16.4 percent of the data on critical care units; 26.1 percent on medical/surgical units; 11.5 percent on psychiatric units; 14.9 percent on obstetric units, 14.2 percent on newborn units, and 16.8 percent on pediatric units.

Across all sites and services, nursing personnel spent 60.5 percent of their time providing indirect care and 24.5 percent providing direct care. They were unavailable for care 15 percent of the time.

In terms of indirect care time, the individual site means varied no more than 4.1 percentage points from the composite mean (see Figure 1). The findings for direct care times varied more. Direct care percentages by facility ranged from a high of 29.2 percent to a low of 18.7 percent. The range of unavailable-for-care percentages was from 21.2 percent to 11.9 percent. Facilities with higher registered-nurse-to-nonprofessional-staff ratios also had higher proportions of time spent providing direct care.

The percentage of direct care provided was highest for the newborn/neonatal intensive care unit and critical care units and lowest for the obstetrical service (see Figure 2). Indirect care requirements were highest for obstetrics and lowest for the newborn services (see Figure 3). The percentage of time nursing personnel were unavailable for care ranged from 16.7 percent for the medical-surgical units to 13 percent on the critical care units (see Figure 4).

The percentage of time spent providing direct care varied from a composite mean of 24.5 percent to a high of 30.3 percent on the evening shift (see Table 1). Nursing personnel working on the night shift have fewer



off-the-ward duties, so the time spent unavailable for care was dramatically lower for them than for staff on the day shift.

We also analyzed the percentages of time spent across all nine sites and all six services combined (see Figure 5). Unavailable-for-care time is represented by the personal and off-unit activity segments of the chart.

When we examined the 11 tasks by each category of care provider, we discovered that head nurses spent 14.5 percent of their time providing direct patient care. Only 2 percent of the time all providers spent was devoted to housekeeping. Even on the obstetrical services, with their high cleaning requirements between deliveries, nurses only spent 3.1 percent of their time doing housekeeping.

Charting and clerical activities consumed 11 percent of the overall time; travel and transportation took 10.7 percent. The overall percentage of time spent waiting to provide care was 8.7 percent. Head nurses spent only 1.6 percent of their time waiting to render care; licensed practical nurses and aides spent approximately 13 percent of their time waiting.

When we look at time spent in indirect care activities as a whole, we get a clearer picture of the individual tasks compared among themselves. For example, communicating, charting and doing clerical work, and administrative functions accounted for almost 50 percent of the indirect care time; travel and transportation consumed 17.7 percent of this time. Registered nurses excluding head nurses spent 24.9 percent of their time charting and doing clerical work, while ward clerks spent only 33.7 percent of their time on those activities.

Determining how nursing service personnel at nine Army facilities with varying bed configurations and missions spent their time revealed that the percentages of times spent providing nursing care in Army hospitals do not differ substantially from those reported in civilian hospitals, considering that working definitions and categories are slightly different (see Figure 6). The percentage of time spent providing direct care reported in this study is lower because of our more stringent definition of direct care. For example, if we had included travel and transportation and equipment set-up and tear-down in the direct-care category, the agreement among the categories in the Lake and Kuhn studies and our own would have been closer. However, our definition conformed to Sherrod's, who defined direct care as only "bedside-to-bedside" tasks.

Our findings for the direct care category were not as consistent as those for the indirect care category. Time spent unavailable to provide care appeared to be the factor that chipped away most from time available to provide direct care. When enlisted soldiers made up a high percentage of the staff, off-unit time increased. Furthermore, when the number of registered nurses was a higher percentage of the total staff, the amount of direct care increased.

The data indicated that waiting-to-provide-care time increased as a function of the number of ancillary providers. This may have been due to nonregistered nurse personnel being unable to perform tasks, being unable to recognize what had to be done, or lacking motivation. Similarly, we might question whether head nurses spent too much time providing direct care unless, while doing so, they were also teaching, supervising, and motivating other staff members.

The findings of this study coupled with patient classification studies such as Sherrod's allow us to examine closely manpower requirements for nursing personnel throughout the Army. However, it is important to remember that as direct care requirements increase, it is not necessarily true that indirect care and unavailable-for-care requirements will decrease linearly. We measured only what is, not what should be. We did not attempt to measure quality of care, only quantities of time spent.

Our findings and those of Sherrod and her colleagues formed the basis for developing a new patient classification system now in use by the Army and the Navy. Because of their reliability and validity, these studies are having significant impact on policy decisions.

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Alcohol Use and Burnout among Student Nurses

MARY R. HAACK

In recent years, researchers have been paying increasing amounts of attention to the problem of impaired health care professionals. In 1982, the American Nurse's Association (ANA) House of Delegates passed a resolution that called for establishing programs to help and intervene with nurses whose functioning is impaired because they misuse alcohol and other drugs or because they have emotional and psychological dysfunctions. The ANA resolution also called for collecting and disseminating information about impaired nurses [1]. Although scholars and practitioners have commonly discussed impairment in terms of alcoholism or drug addiction, the phenomenon is complex and includes other distinct and related dysfunctions. Burnout is a response to occupational stress that can also seriously impair professional functioning. To determine how much damage burnout can do, I explored how it relates to patterns of alcohol use among potential practitioners—student nurses.

Although citizens in all Western societies use alcoholic beverages, consumption varies greatly from person to person depending on individual preferences and social norms. United States survey data suggest that one-third of American adults abstain or seldom drink; another third have up to three drinks per week; and the remaining third have four or more drinks per week. Experts have defined about one-third of the latter groups as problem drinkers. Clark and Midanik have estimated that more than 10 million adults 18 years of age and older, or about 11 percent of the adult population, consume about half of all alcohol beverages sold [2]. Several researchers have shown that most college students use alcohol. Blane and Hewitt summarized the findings of 44 surveys conducted between 1971 and 1978 and reported that approximately 88 percent of collegians drink—89 percent of the men and 48 percent of the women [3].

More recently, Weschler and McFadden surveyed New England college students and found that less than 5 percent of them abstained from alcohol and that a majority drank weekly or more often. About 70 percent of the men and about 50 percent of the women reported drinking at least once a week. Men consumed significantly higher quantities of alcohol on a typical occasion than did women [4].

The consistency in the finding of differences in drinking behaviors between men and women in both college and non-college studies suggests that drinking may be associated with traditional sex roles—with traditional ideas about what constitutes appropriate and distinctive behaviors for men and women. Wilsnack and Wilsnack noted that changes in sex-role behavior have also brought about an increase in drinking among women, particularly among young women [5]. The proportion of college women who drink at least occasionally increased from 61 percent in 1949 and 1952 to 73 percent in the early 1970s [6,7]. These changes have led experts to speculate that the increased drinking may be a consequence of the women's movement and subsequent changes in traditional feminine roles and behaviors [8].

Alcohol Use among Nurses

Few researchers have investigated the drinking patterns of student nurses [9-11]. Since nursing draws almost exclusively on the young female population, it is conceivable that the proportion of abstainers among the women entering this profession of traditional feminine roles may be higher than among college women in general. Traditionally, females have either not consumed alcohol at all or have consumed significantly less than males have [12].

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On the other hand, Wright pointed out that, of the 1.5 million practicing nurses in the U. S. in 1982, experts estimated that 75,000 of them were alcohol dependent [13].

However, there are no empirical data on the prevalence of alcoholism among nurses. In view of the experts' estimates, studying the drinking practices of student nurses can provide a background of important etiologic data.

Recently, Haack and Harford studied student nurses in a senior class of a college of nursing and found that nursing students have adopted a pattern of alcohol comsumption comparable to that of other female collegiate students. The majority of the student nurses indicated that they used alcohol regularly, and 13 percent reported alcohol-related problems either at school or at work [14].

Burnout

Other investigators have shown that health professionals employed in jobs that demand intense contact with human suffering and crises are particularly vulnerable to the burnout syndrome. According to Maslach, burnout is a job-stress syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people [15]. Burnout symptoms are responses to the chronic emotional strain of dealing with others, particularly those who are experiencing a life crisis. Thus, the experts consider them specific types of occupational stresses [16].

Stress is a disruption of homeostasis as a result of external or internal events that disturb the normal flow of an individual's life [17]. It is not necessarily negative or undesirable, but an individual must be able to feel in control of the stressful events [18,19]. Abramson, Seligman, and Teasdale postulate that, confronted with an uncontrollable outcome, individuals attribute its cause to something outside of their control and develop symptoms of helplessness and inability to cope. According to this model of learned helplessness, individuals who feel in control despite negative events do not show symptoms of helplessness or inability to cope [20]. Although burnout has some of the same deleterious effects as other stress responses, what is unique about it is that the stress arises from the interaction between helper and client or from the interaction between helper and the environment. In nursing, this type of stress is unavoidable. The unique response of a nurse to being involved with suffering people may depend on such organizational factors as support of superiors and a work environment that allows the nurse to control his or her work load responsibilities [21]. Such self-care strategies as regular exercise, meditation, or psychological withdrawal may also influence a nurse's ability to cope with occupational stress [22].

Negative responses to the occupational stress in nursing can cause burnout. Symptoms include gradually losing a sense of caring about clients; talking about emotional exhaustion; losing positive feelings, sympathy, and respect for clients; seeing clients cynically; blaming clients for their illness; increasing the use of alcohol and other drugs; talking negatively about oneself; and having conflicts at home [23]. Experts often cite an increase in alcohol and prescription drug use as a negative coping strategy for dealing with burnout [24,25]. Although several researchers report a relationship between burnout and alcohol consumption, the nature of that relationship is not clear. Moderate alcohol use might relieve stress, but there is always the danger of dependence.

Although it seems unlikely that nursing students would experience burnout syndrome at such an early stage in their professional development, Kramer and Baker have shown that one-third of newly graduated nurses leave the field within the first two years of practice [26]. Therefore, I thought it would be valuable to investigate how burnout relates to alcohol use among student nurses.

The subjects for this study were sophomore, junior, and senior students enrolled full-time in a school of nursing. Three percent of the subjects were 19 years of age, 16 percent were 20, 22 percent were 21, 46 percent were between 22 and 25, and 13 percent were 26 or older. Eighty percent of the students were unmarried, and 79 percent were Caucasian. I determined students' social class status based on their fathers' occupations—35 percent were professionals, 30 percent had white-collar jobs, and 35 percent had blue-collar jobs. Sixty percent of the students' fathers had some college background and 51 percent of their mothers did. Of the total student population of 367 students, 279 participated in the study by completing the Staff Burnout Scale for Health Professionals (SBS-HP), which is a 30-item inventory Jones developed to provide a valid and reliable measure of the burnout syndrome defined by Maslach and Pines [27,28]. Twenty items measure the burnout syndrome and 10 items form a lie scale. I modified some of the items slightly to include school work as well as clinical work.

The SBS-HP assesses adverse cognitive, affective, behavioral, and psychophysiological reactions that make up the burnout syndrome. Although it yields one total burnout score, Jones found that it has four factors: a 7-item general *dissatisfaction with work* factor; a 7-item *psychological/interpersonal tension* factor; a 3-item *physical illness and distress* factor; and a 3-item *unprofessional patient relationships* factor [29].

Questions on the use of alcohol include the number of drinking days in the past month and in the past week and the total number of drinks consumed in the past week by type of beverage. Two items assess whether drinking has interfered with the subject's schoolwork, job, or both.

Results

Six percent of the subjects indicated that they were abstainers, and 11 percent reported that they drank infrequently and had not used alcohol in the past month. Twenty-three percent reported drinking in the past month but not in the past week, and 32 percent report drinking two or more days in the past week.

Eighty-three percent of the subjects reported using alcohol within the past month. Although the proportion of abstainers in my study—6 percent—is similar to the 4 percent Weschler and McFadden reported finding among New England college women, more of my subjects reported frequent drinking. Forty-six percent of the women Weschler and McFadden queried and 34 percent of my subjects drank less than weekly. Fifty percent of Weschler and McFadden's subjects and 60 percent of mine drank one or two times a week or more [30].

Approximately 12 percent of my subjects reported that alcohol interfered with school work; 7 percent said it interfered with their jobs. Thirteen respondents reported problems both at school and at work. Overall, 14 percent of the students had one or both problems.

Burnout

Scores on the SBS-HP can range from 20, which indicates no burnout, to 140, which indicates severe burnout. The mean score for my study was 62.8, which is similar to those reported in other studies of practicing professional nurses and other health professions [31]. According to Jones, the mean score for nurses employed in hospitals is 52.9, and the mean for speciality nurses such as emergency room nurses is 62.6 [32]. This finding suggests that health professionals in training are not immune to the burnout syndrome. The nature and quality of burnout in the students may differ from those of practicing professionals and require further study.

Alcohol and Burnout

An analysis of variance of the SBS-HP total scores by drinker category yielded significant differences among the students. Students who reported drinking two or more times in the past week had a mean burnout score of 66.4; abstainers' mean score was 60.6; and infrequent drinkers had a mean score of 56.

To relate the level of burnout to alcohol use, I divided the SBS-HP scores into quartiles to form four burnout groups and performed an analysis of a variance with the drinking measures (see Table 1). Student nurses in the high burnout group reported more frequent drinking and higher consumption levels than did students in lower burnout groups. Drinking amounts in the past week and burnout scores were similar for wine, beer, and liquor. The relationships between drinking frequency, drinking quantity, and burnout were consistent for the use of alcohol in the past month and past week, indicating an overall relationship between drinking practices and burnout.

Total burnout scores also correlated significantly with alcohol problems. High burnout scores were related to problems both at school and at work. Further study using repeated measures will help determine the stability of these findings over time. Researchers should also explore the use of other mood-altering substances.

Discussion

These findings show that the student nurses queried consumed alcohol in a pattern consistent with other college students. The majority of them reported using alcohol, and they associated the onset of drinking with entering college. Fourteen percent of the subjects reported alcohol had interfered with school or work, which suggests abusive drinking. Although alcohol use is a normal part of college life, it is not without risk.

Some university educators and administrators have responded to drinking problems on campus by offering prevention and intervention programs. Recognizing that moralistic and authoritarian approaches that stress abstinence do not work, educators have developed programs that encourage responsible drinking. The most successful programs are designed to educate students about alcohol and the relationship between alcohol consumption and negative consequences; combat the nothing-to-do-but-drink syndrome by providing attractive alternatives for recreation; counsel and treat students who have drinking problems; intervene by confronting students who have problems and make certain that they get help [33].

After evaluating a university alcohol education program that involved showing a film and discussing values clarification, Engs reported that the program increased students' knowledge about alcohol but did not influence their drinking behaviors [34]. Other investigators report that education can change drinking behaviors [35,36]. Gardiner, Wilsnack, and Slotnick did a study with medical students and determined that increased faculty support reduced student alcohol consumption [37]. These studies suggest that it is possible to modify drinking behaviors among students through prevention programs.

Although nurse educators advocate prevention as part of the practice of nursing, they teach very little about preventing illness and dysfunction

*Table 1. Summary of Analysis of Variance of Drinking Variables by Burnout Groups**

	Burnout Groups			
Drinking Frequency	**1**	**2**	**3**	**4**
Number of days past month	2.7	4.0	4.4	6.4
Number of days past week	7.8	.90	1.1	1.6
Drinking Quantity	**1**	**2**	**3**	**4**
Number of drinks past month	9.4	9.5	10.8	18.2
Number of drinks past week	2.5	1.9	3.1	5.5
Number beer past week	1.2	.8	1.4	2.4
Number wine past week	.5	.7	.9	1.4
Number liquor past week	.83	.46	.79	1.7

**Any two means not underscored by the same line are significantly different*

among nurses. Student nurses learn the pharmacological solutions to almost every health problem, which is consistent with present trends in medical and psychiatric treatment, but which creates the danger that students will incorporate a chemical solution into managing their own physical or psychological pain. Studies indicate that nurses tend to view themselves as helpers, not as recipients of help, and that they believe their knowledge protects them from illness, which may enhance the risk that they will use alcohol as a coping mechanism [38,39].

More than half of the student nurses I surveyed scored in the high range of burnout. There appeared to be some relationship between heavier drinking and high burnout, although the direction of this relationship is unclear. The presence of high burnout scores implies that these students feel depleted and callous toward their patients. If they use alcohol as a way to cope with these feelings, the consequences can be destructive.

The occurrence of burnout syndrome at such an early stage of professional development suggests the need for burnout intervention in undergraduate programs. Researchers should look into what interventions would be most effective as well as how and when burnout begins.

Experts on burnout suggest that five aspects of professional training programs contribute to burnout: they tend to create unrealistic expectations; the curricula are not practical enough; they do not train students sufficiently in interpersonal skills; they do not provide adequate knowledge of how to function in bureaucratic organizations; and they do not teach professionals how to cope with uncertainty, change, conflict, stress, and burnout [40].

We cannot expect that changing curricula to accommodate material on the problem areas would have a long-range effect. Information does not prevent burnout. Talented teachers who are coping with clinical issues can be powerful role models, and doing so is a better teaching method than providing information. Teaching students about the effectiveness of a support system as a deterrent to burnout and developing programs for the secondary development of students with drinking problems are also important [41-45]. These interventions require further study as well.

I have demonstrated that nursing students are at risk for dysfunctions such as burnout and alcohol abuse, which can lead to impaired professional practice. Preventing and treating burnout and alcohol abuse among student nurses will benefit the profession.

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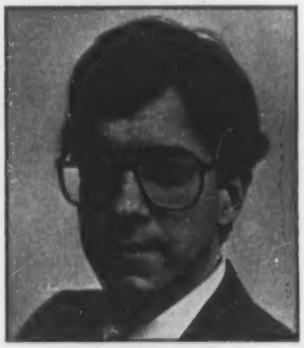

Show of Support Needed Now for Nursing Appropriations

By Kevin L. Morrissey
Director of Communications, NLN

Nursing education and research appropriations for fiscal year 1988 are now under consideration on Capitol Hill, and a show of support from nurses around the country is needed to back up the case for increased funding being made in Congress by the Nursing Tri-Council (NLN, the American Association of Colleges of Nursing, the American Nurses' Association, and the American Organization of Nurse Executives).

As was reported in this column in February, President Reagan has once again called for eliminating federal funding of nursing education in his FY88 budget. Despite the inclusion of this same proposal in the administration's FY87 budget, nursing was successful in generating congressional support and ultimately garnering $53.3 million for nursing education.

Visits over the last several weeks by representatives of Nursing Tri-Council organizations with members of the Senate and House appropriations committees and other key legislators demonstrate little inclination on Capitol Hill to accept the President's recommendation, especially in light of the growing evidence that we are in the throes of a critical national nursing shortage of unprecedented dimensions.

Confronted with recent American Hospital Association data showing that hospital RN vacancies doubled last year, NLN data indicating an ongoing nose dive in enrollments, and banner newspaper headlines across the country heralding the shortage, legislators are justifiably nervous about the impact on health care services for their constituents.

And looking at supply and demand projections for the remainder of the century, all indicators point toward the most serious problem in the areas of advanced and specialized preparation that are the focus of current federal funding programs. Federal projections indicate that the supply of baccalaureate nursing graduates will be about half the demand in the year 2000, and that the supply of graduate-prepared nurses at the turn of the century will be only one-third of the demand.

At press time, hearings schedules in the approriations committees have not yet been confirmed, but we expect to present testimony in the House later this month and in the Senate early in May. For FY88 nursing education funding, the Nursing Tri-Council is recommending appropriation of the full $56.6 million authorized under the Nurse Education Act, as illustrated by line item in the table below.

For nursing research programs, the imperative is to achieve sufficient and necessary funding for the new National Center for Nursing Research at the National Institutes of Health, establishment of which represented a major victory for the nursing community.

The President—who twice vetoed legislation to establish a nursing research entity at NIH—included $17.5 million for nursing research in his budget, representing a decrease from the $19 million appropriated in FY87. Based upon the recommendations of supporters on congressional appropriations committees, the Nursing Tri-Council will request $25 million for FY88 nursing research appropriations.

Nursing Education and Research Appropriations

Nursing Education	FY87	President's FY88 Budget Request	Tri-Council FY88 Budget Request
Advanced Nurse Education	$16,750,000	$0	$17,500,000
Nurse Practitioners	12,000,000	0	12,000,000
Special Projects	9,500,000	0	9,500,000
Traineeships	11,750,000	0	13,000,000
Nurse Anesthetists	800,000	0	800,000
Demonstration Projects	1,675,000	0	2,700,000
Faculty Fellowships	825,000	0	1,100,000
TOTAL	$53,300,000	$0	$56,600,000
Nursing Research	$19,000,000	$17,500,000	$25,000,000
Grand Total	$72,300,000	$17,500,000	$81,600,000

Write Your Legislators Now

To ensure adequate funding of nursing education and research in the coming fiscal year, it is of crucial importance that you write your U.S. senators and representatives as soon as possible—and urge your colleagues to do so as well—urging support of FY88 appropriations of $81.6 million for nursing education and research.

Nursing Tri-Council testimony by itself is not enough. Despite a generally receptive mood on Capitol Hill, we are in a period of serious budget constraints and looming federal deficits. It is important that all members of Congress, and most especially those who sit on appropriations committees, hear from constituents in their home states. It is particularly helpful if you can illustrate how nursing education funding is supporting schools and students in their own districts, how their constituents stand to benefit from nursing research, and how the reduction of federal support would affect nurses and consumers in their home states. Please contact this office if you need any assistance in identifying your legislators or determining the committees on which they serve.

Urge Attendance at June Capitol Hill Reception

When you contact your senators and representatives regarding appropriations, please urge them as well to attend the congressional reception on Capitol Hill that NLN is hosting in conjunction with the upcoming biennial convention in Washington, D.C. This event will take place on Wednesday evening, June 17, from 5:30 to 7:30 p.m. in the Rayburn House Office Building. Make sure that your legislators know that you and hundreds of your colleagues from their district are looking forward to seeing them there. And please plan to remind them of this event before you leave for the convention, and call their Capitol Hill offices as soon as you arrive in Washington. The reception will provide a unique opportunity for you and your colleagues to discuss with your legislators the numerous pressing legislative issues on the table in the 100th Congress.

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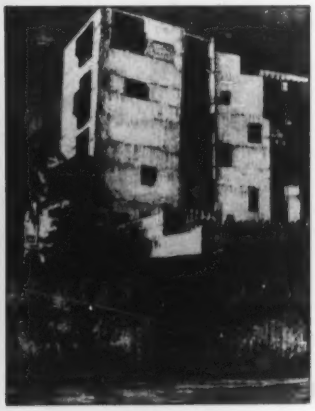

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Weighing the Costs and the Benefits of Student Education to Service Agencies—Part 2

E. ANN HILLESTAD
PATTY L. HAWKEN

Recent concern over financial cutbacks in hospitals and schools of nursing have increased interest in examining the costs and benefits of educating nursing students in hospitals. A literature review revealed a paucity of cost-to-benefit analyses and no studies devoted to the effect of intangible elements on the exchange.

In the first part of this article, which appeared in the April 1987 issue of *Nursing & Health Care*, we described a cost-to-benefit analysis of nursing student education to service agencies (see page 222). The question we asked was "Is there an equitable exchange of resources between education programs and service agencies that cooperate in educating nursing students?"

To answer that question, we first determined that the hospital, the students, and the nursing staff contribute two types of benefits to the hospital and to the school: tangible activities, such as providing physical care; and intangible benefits, such as having an opportunity to recruit students to work in the agency after graduation.

The specific questions we studied were what tangible and intangible resources do baccalaureate and higher degree schools of nursing and service agencies exchange, and is the exchange of these resources equitable?

We used Nord's Resource-Exchange Paradigm to examine these questions [1]. The paradigm describes social interactions as fundamental aspects of resource exchange. The resources exchanged between organizations are those that help them achieve their goals. The relationship between two organizations is satisfactory when each views the exchange as equitable.

In the study, we determined what tangible and intangible items a school of nursing and a hospital exchange. The article in the April issue includes a thorough discussion of the study design, the sample, data collection, and the analysis of the tangible resources; here we will focus on the exchange of intangible resources.

We devised a questionnaire that listed all of the intangible resources that a school of nursing contributes to a hospital and all of the intangible resources that a hospital contributes to a school of nursing. We sent the questionnaires to five hospital administrators and five directors of nursing in the institutions we had chosen to study, to the eight faculty members who work with students in medical-surgical areas in these hospitals, and to 23 staff nurses who have contact with our students as team leaders, head nurses, or clinical specialists. We received questionnaires back from everyone except one hospital administrator.

We divided the questionnaire into three respondent groups—nursing school faculty members, hospital staff nurses, and hospital and nursing administrators. We asked the respondents to rate their opinions on each of the intangible resources provided by the school on a scale of one to five (minimally important to very important). The seven intangible resources listed were:

- Prestige of being associated with a teaching facility
- Recruitment tool—access to education helps facilities recruit staff
- Recruitment pool—students are available as prospective staff members after graduation
- Job enrichment—participation in nursing education provides an added dimension to staff members' jobs
- Maintaining nursing skills—reinforcing appropriate principles and tasks when students are around

E. Ann Hillestad, PhD, RN, is an assistant professor at the University of Texas Health Science Center at San Antonio School of Nursing and a former nursing service administrator. Patty Hawken, PhD, RN, is dean and professor at the same school. Special thanks to Sara Draper, MSN, RN, research associate, who participated in data collection.

Table 1. Intangible Resources — School of Nursing. Kruskal-Wallis Values among Faculty (n=8), Staff (n=23), and Administrators (n=9). (df=2)

Item	Group	Mean Rank	Chi Square	p value
Prestige	Faculty	16.63		
	Staff	18.67	6.9415	0.0311
	Administrators	28.61		
Recruitment tool	Faculty	16.81		
	Staff	19.76	3.0872	0.2136
	Administrators	25.67		
Recruitment pool	Faculty	21.50		
	Staff	18.67	1.9922	0.3693
	Administrators	24.28		
Job enrichment	Faculty	11.81		
	Staff	19.87	11.3963	0.0034
	Administrators	29.83		
Skill maintenance	Faculty	14.38		
	Staff	20.17	5.4062	0.0670
	Administrators	26.78		
Analysis of care	Faculty	14.88		
	Staff	19.54	6.5426	0.0380
	Administrators	27.94		
Continued learning	Faculty	10.00		
	Staff	20.65	13.4945	0.0012
	Administrators	29.44		

- Impetus for analyzing nursing care—students' questions serve as stimulus for staff members
- Continued learning—staff encouraged to stay current in nursing and to seek additional education.

We tabulated responses from each item and used the nonparametric Kruskal-Wallis One-Way Analysis of Variance (ANOVA) to analyze the data (see Table 1). There was a statistically significant difference in responses to the prestige, job enrichment, analysis of care, and continued learning items. The administrative group rated prestige as very important; faculty members and staff rated it as important. Administrators are perhaps more aware of such benefits of being associated with a university health science center as cooperative research, shared resources, and joint accomplishments. Although faculty members and staff may not be as aware of the significance of high visibility for institutions when they cooperate in these activities, both groups appreciated this element as important.

The administrators and staff were in close agreement about job enrichment as a result of having students in the facility. Administrators ranked this as very important; the majority of the staff indicated it was important. Faculty members rated this area as moderately important. Faculty members are less aware than the members of the other groups of the impact and influence of the students' presence in clinical settings and its importance to staff and administrators.

The next item rated was the influence of students' questions as an impetus to better patient care. Administrators rated this item as very important; faculty members rated it as moderately important, and staff members rated it as important. Administrators and staff members had a higher opinion of this influence than did faculty members, which highlights the idea that faculty members are unaware of the influence of student interactions with staff members and the value the others place on their questions.

The last item on which the responses were significantly different was the influence students' presence had on staff members' continued learning. Administrators viewed this as very important; staff marked it in the important category. Faculty members' responses ranged from minimally important to important—with the mean centering around moderately important.

The responses to these four items, although different for each group, ranged from minimally important to very important. Administrators and staff members value student contributions highly and view students' presence as a direct influence on their institutions and staffs. Faculty members are supportive of these items but are not as aware as the others of their effect or value to the institution.

On three items, there was no difference in responses and therefore close agreement among respondents. Thirty-

one of the 40 respondents marked being associated with a university as an important or very important recruitment tool. Some of the institutions mention the access to education in their recruiting literature and advertisements, which verifies the significance of this association to them.

The highest agreement was in relation to having the opportunity to recruit.Thirty-four of the 40 respondents marked this as very important or important. The respondents evidently agree that familiarity with an institution's policies, personnel, and environment affects a student's employment decisions.

The administrators rated nursing education's role in helping staff members maintain their nursing skills as very important, while both staff and faculty rated this item as important. The high ratings on this item underscore the influence and contribution of the students' presence in maintaining quality patient care.

The survey of three groups on the importance of seven intangible resources that a school provides to a hospital resulted in a varied response. The groups reached a high level of agreement that the school contributes to the hospital recruitment pool. They all reached close agreement on the idea that being associated with a university serves as a recruitment tool and that it helps staff members maintain their nursing skills. Administrators and staff members thought the students' presence brought more prestige to the institution and helped staff maintain nursing skills, analyze care, and continue learning more than faculty members did. Faculty members may believe that the school's contribution is lesser in importance than the others believe. These data support that conclusion. Administrators indicated that the school and students have an important influence on the institution, staff, and patient care. Staff nurses also had very positive opinions about the school's and the students' contributions.

For the second list of intangible items, we asked the respondents to rate the degree of importance for each of the items the hospital contributes to the school. The items on this list were:

- Opportunities to provide nursing care—access to patients and families to provide nursing care
- Knowledge and skill of the staff—staff share their knowledge and skills with students and provide protection and backup
- Interaction with medical staff—making rounds with physicians and talking with the patients' doctors
- Interaction with other health personnel—talking with social service personnel, dietary personnel, laboratory personnel, and so on
- Evaluation and feedback—direct feedback from the staff to the students about the students' performance
- Experience in an organizational setting—providing the student with insights into the organizational complex-

Table 2. Intangible Resources — Clinical Facility. Kruskal-Wallis Values among Faculty (n=8), Staff (n=23), and Administrators (n=9). (df=2)

Item	Group	Mean Rank	Chi Square	p value
Opportunity to provide care	Faculty	20.06	1.2654	0.5312
	Staff	19.56		
	Administrators	23.39		
Skill of the staff	Faculty	13.63	7.6048	0.0223
	Staff	20.15		
	Administrators	27.50		
Interaction with physicians	Faculty	10.94	9.3401	0.0094
	Staff	21.07		
	Administrators	27.56		
Interaction with other personnel	Faculty	10.94	8.8752	0.0118
	Staff	21.35		
	Administrators	26.83		
Feedback and evaluation	Faculty	10.25	9.5615	0.0084
	Staff	22.24		
	Administrators	25.17		
Organizational experience	Faculty	16.44	4.2364	0.1203
	Staff	19.61		
	Administrators	26.39		
Recruitment of staff as students	Faculty	16.75	4.5176	0.1045
	Staff	18.75		
	Administrators	25.94		

Table 3. Average Total and Average Item Response Scores by Group.

	Intangible Resources					
	School			Clinical Facility		
	Faculty (n=8)	Staff (n=23)	Administrators (n=9)	Faculty (n=8)	Staff (n=23)	Administrators (n=9)
Average total scores	25.25	28.83	33.11	23.25	29.70	33.00
Average item scores	3.61	4.12	4.73	3.32	4.24	4.71

ities of delivering nursing care

- Recruitment—provides an opportunity for contact with staff members as potential students

Table 2 shows the results of this analysis using the Kruskal-Wallis One-Way ANOVA. Respondents differed in their opinions on staff skill, interaction with physicians, interactions with other personnel, and feedback and evaluation.

The major difference of opinion about the skill of the staff was between the faculty members and the administrators. The faculty members rated staff knowledge as important, and administrators ranked it as very important. Fourteen staff nurses ranked this item as very important; eight ranked it as important. Perhaps the emphasis on clinical teaching and the ratio of a limited number of students to each faculty member have de-emphasized the importance of staff-student interaction to faculty members.

The two items that deal with students' interaction with other health care personnel rated different opinions. Administrators placed the most importance on these interactions; faculty members placed the least importance on them. Staff nurses and administrators are in constant contact with other personnel and believe this to be an important part of their jobs. Faculty members and students may have less interaction due to specific learning objectives. Faculty members may also buffer this interaction by participating in the interactions themselves and excluding the students.

The last item varying significantly was evaluation and feedback from the staff. The faculty members considered staff feedback somewhat important. Staff and administrators rated this item as very important or important. Educators may be so attuned to their responsibility for enabling students to meet course objectives that they do not think it appropriate for others to evaluate student performance. They may also view their formal evaluation of students as more significant than informal evaluation by staff. The responses regarding opportunities to provide care, receiving organizational experience, and opportunities to recruit staff as students did not vary significantly and therefore indicated agreement. Thirty-one of the 40 respondents rated the opportunity to give nursing care as very important; seven rated it as important. This finding emphasizes the important role of clinical experience in nursing education.

Considering the previous findings, we were surprised that the opinions on the importance of receiving experience in an organization did not differ significantly. Most respondents viewed this item as important or very important. Since this item referred to the importance of students gaining insight into the influence of organizational complexities and into the costs associated with care delivery, it was possible that the mixed levels of student experience would have brought about a varied response. This was not the case; all groups rated this item equally.

The importance of recruitment did not reveal significant differences in the opinion among the groups. All groups indicated that this was important. This result was consistent with the response of the three groups on the first part of the form in relation to having students in the facility being a recruitment tool and resulting in a recruitment pool. Schools of nursing with declining enrollments have to take full advantage of recruitment opportunities within agencies since agency personnel recognize this contact as important for future education.

The staff and administrators thought the knowledge and skill of the staff, the opportunity to interact with the medical staff, the opportunity to interact with other health care personnel, and evaluation and feedback by staff members were more important than faculty members did. There was strong agreement on the importance of opportunities for students to provide nursing care in the clinical setting, gain insight into organizational complexities, and provide contact with staff members for recruitment back into nursing education.

Conclusions

One aim of this project was to determine whether or not the exchange of resources between a school of nursing and a clinical facility is equitable. We divided the resources being exchanged into groups of tangible and intangible resources. The report on tangible resources indicated that the exchange of tangible resources was not equitable—the tangible resources contributed by the school of nursing had a greater monetary value than those contributed by the clinical facilities.

Since we cannot place monetary values on intangible resources, we used questionnaires to assess the importance of the intangible resources to nursing faculty members, members of the nursing staffs, and hospital and nursing administrators in the clinical facilities. We examined each item in the questionnaires individually; there were statistically significant differences on 8 of the 14 items. In every

instance except one, the faculty members had lower mean scores than did the other two groups. One conclusion is that the faculty members believe that both the items contributed by the school and those contributed by the hospitals are less important than the staff and administrators believe.

To try to assess equity, we added the sums of the responses of each of the three groups for each part of the questionnaire and divided by the number of respondents in each group. These calculations resulted in average total response scores, which we divided by the number of items in each questionnaire to yield an average item response score (Table 3).

Capitalize on Findings

These figures indicate that the faculty members attributed slightly more importance to the resources contributed by the schools; staff members attributed very slightly more importance to the resources contributed by the clinical facilities, and administrators indicated no difference. Based on this information, the exchange of intangible resources between the school and the clinical facilities is equitable. This conclusion does not weight the importance of each item—it treats each item as equally important when, in fact, that may not be true. This study highlights the positive opinions of administrators and staff in some important areas and also gives direction to schools of nursing in relation to faculty members' attitudes about the school's importance. Helping educators to be aware of and capitalize on the importance of this resource exchange could bring about greater appreciation of staff nurses, increased recruitment, and closer working relationships.

The importance of intangible resource exchange cannot be overlooked. Dollar amounts are critical indicators of a shared partnership, while intangible resource factors have a high degree of importance and help promote nursing and quality patient care beyond a monetary value.

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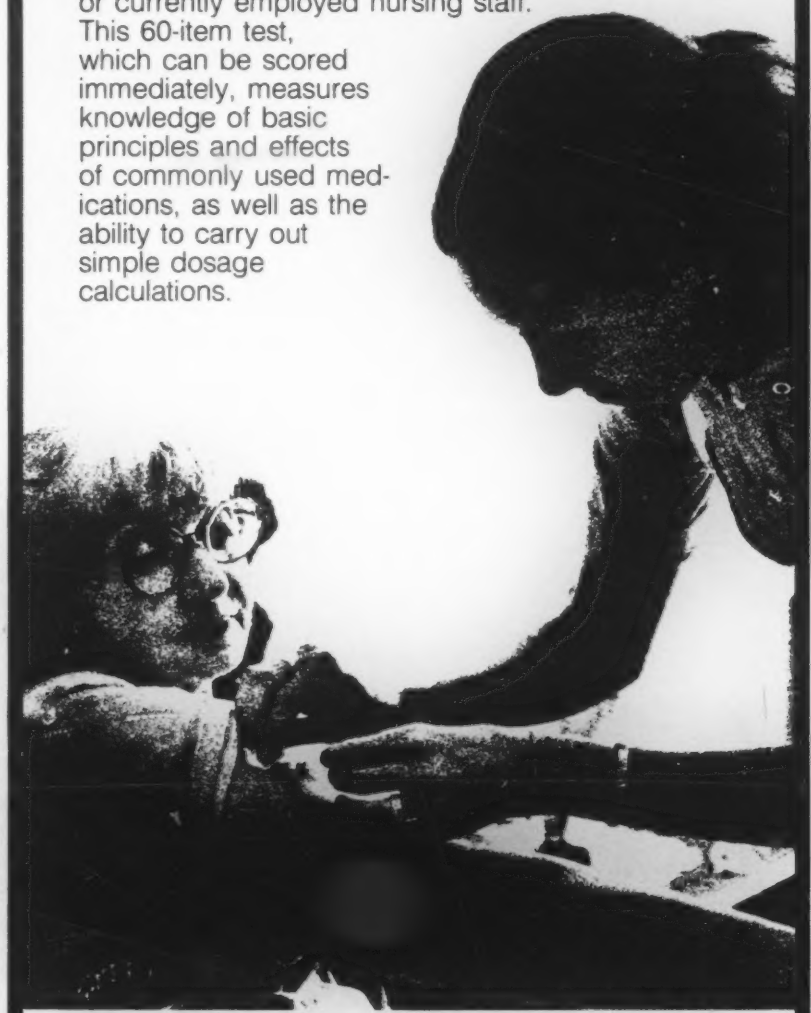

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Nursing Education in Crisis — A Look at Recruitment and Retention

PERI ROSENFELD

The problems of finding qualified nursing students — and keeping them — are approaching crisis proportions. That fact becomes clear when we look closely at the results of the National League for Nursing's (NLN's) 1985 annual survey of nursing education programs and at preliminary data from the 1986 survey.

In 1985, annual admissions to basic nursing programs fell 4.5 percent from 1984, down to 118,200. Diploma programs felt the most dramatic drop — admissions plummeted by almost 17 percent from the previous year. Associate degree programs experienced a 4.2 percent decline, and baccalaureate programs maintained an increase of less than 1 percent. In addition, enrollments fell 8 percent from 1984 and 13 percent from 1983. Here, too, diploma programs suffered the greatest loss — a 19 percent drop over the previous year. Associate degree programs lost almost 8 percent of their 1984 enrollments, and baccalaureate programs lost 4 percent (see Table 1).

Unfortunately, it looks as though the situation will get worse before it gets better. Data on 1986 fall admissions — which constitute the majority of annual admissions — reveal an 8.8 percent decrease to about 83,000, which is the lowest fall admissions figure since 1970. The number of applications to nursing programs is also shrinking.

The now-documented nursing shortage and the decreases in nursing school enrollments indicate an urgent need to recruit individuals into the profession. And the challenge to recruit enough students is compounded by the need to attract qualified students who can "make the grade." Understanding the current admission and recruitment practices among registered nurse (RN) programs will give educators a strong foundation upon which to plan for the future. To get a firm handle on today's admissions policies and on the recruitment strategies nursing programs are using, in 1985, NLN researchers added a "special topic" section to the annual surveys sent to RN programs. The 1985 special topic was admissions policies and recruitment practices; in 1986 we followed up with a focus on retention.

Ninety-two percent of the 256 diploma programs responded to the 1985 survey, as did 85 percent of the 441 baccalaureate programs and 74 percent of 776 associate degree programs. Overall, almost 80 percent of all basic RN programs responded to the special topic section.

The results of the study indicate that shrinking applicant pools are forcing programs to lower admission standards and to offer large doses of remediation to the students they accept.

Almost 80 percent of the responding programs said that applicants must achieve a minimum level of academic achievement to be admitted (see Figure 1). Most, however, did not specify what that standard was. Baccalaureate programs were most likely to require some minimum academic achievement, followed by diploma and associate degree programs. More than half of the programs required that applicants take a standardized exam such as Scholastic Aptitude Test (SAT) or the American College Test (ACT). Diploma programs were most likely to require this criterion for admission.

The most frequently cited measure for admission was a grade point average of 2.5 or higher. Programs that considered the results of standardized examinations for admission most often used the SAT or the ACT, and they considered combined SAT scores ranging from 700 to 1,000 as the minimum scores appropriate for admission. This finding is borne out by College Board officials, who point out that a small number of SAT takers are considering nursing and that the scores of prospective nursing students are considerably lower than those of other college entrants.

In addition to objective evaluation measures, some schools use more qualitative measures. Forty-four percent of the programs required an interview; 44 percent required a personal statement; and 44 percent required letters of recommendation. All of these requirements were most likely to be

Peri Rosenfeld, PhD, is the director of research at the National League for Nursing in New York City.

Table 1. Results of National League for Nursing's 1985 Annual Survey of Nursing Educational Programs

	Total		Generic Baccalaureate		Associate Degree		Diploma	
	N	% Change*	N	% Change*	N	% Change*	N	% Change*
Annual admissions	118,224	−4.5	39,573	+0.4	63,776	−4.2	14,875	−16.7
Enrollments	217,955	−8.1	91,020	−4.2	96,756	−7.8	30,179	−19.0
Fall admissions	83,026	−8.8	28,883	−0.3	44,966	−8.0	9,177	−33.3
Applications (% change since 1982)	175,043	−26.7	54,879	−19.2	92,450	−26.0	27,714	−39.9

*% change since previous year

found among diploma programs.

We cannot review this data without fearing that, for some programs, the only two choices are to remain in business by reducing standards or to close. The American University in the District of Columbia faced this decision last year; they have not accepted any new nursing students since fall 1986.

If nursing programs cannot make sure that most of the students they admit are qualified to complete a nursing program, they have to offer remedial courses to retain the students they admit. The majority of nursing school directors responded that remediation is available in math, reading, and study skills. One-third have remedial courses available in other areas, such as writing and science courses (see Figure 2).

Associate degree programs were most likely to offer remedial courses — more than 75 percent said they offer remedial courses in math, reading, and study skills. Well over half of the baccalaureate programs offer remediation, and diploma programs are the least likely to offer remedial courses.

According to Hodgkinson, college students in the future will require more academic assistance to graduate than did students in the past because demographic trends indicate that the number of minority and immigrant students entering into our educational system is on the rise, and those students generally require more remediation than do middle class students. In addition, more high school graduates in the future will have been raised in poorer, single-parent households than in the past. These individuals also tend to need more academic help. Because of varying fertility rates, fewer white, middle-class children will be coming through the educational pipeline [1].

In the special topic section of our 1986 annual survey, we asked nursing program directors about retaining students. Preliminary findings indicate that close to 50 percent of the responding programs are having problems doing so. Of those, two-thirds say that the major factor contributing to their attrition problems is that "students have difficulty with the required courses." Family obligations and financial problems ranked a distant second and third in order of importance. Clearly, remediation is a much-needed component in nursing education. Once students are accepted, they need help finishing the program. However, demographic trends suggest that remediation will probably be a more serious problem in the future than it has been in the past.

Just as programs will have difficulties retaining the students they admit, recruiting qualified candidates will also become a more difficult task. Hodgkinson has pointed out that as "fewer students are spread across the same number of institutions . . . some institutions (will) try to attract anyone who is warm and breathing into their opening class [2]."

Institutions of higher learning have traditionally considered any form of advertising an anathema to their dignity and integrity. However, today's situation requires aggressive recruitment techniques to attract enough applicants to nursing programs.

According to Gunnerson, colleges and universities are exploring such in-

Figure 1. Percentages of Programs that Require Specific GPAs or Standardized Exams for Admission

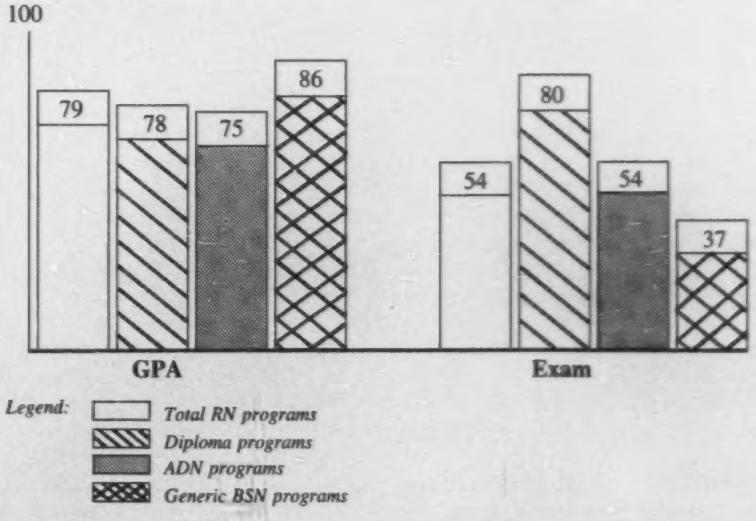
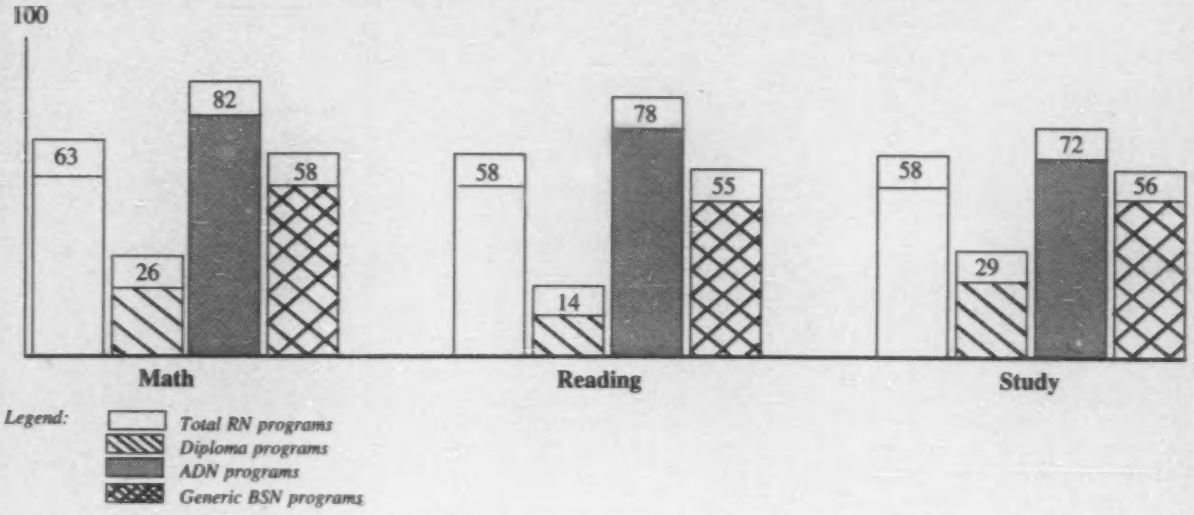


Figure 2. Percentages of Programs that Offer Remedial Courses in Math, Reading, and Study Skills



novative recruitment campaigns as inserting schedules of classes in local newspapers, offering day care facilities to students, mounting poster campaigns with the familiar tear-off reply cards, sponsoring college night and college fairs, and using direct mail campaigns with diligent follow-up [3].

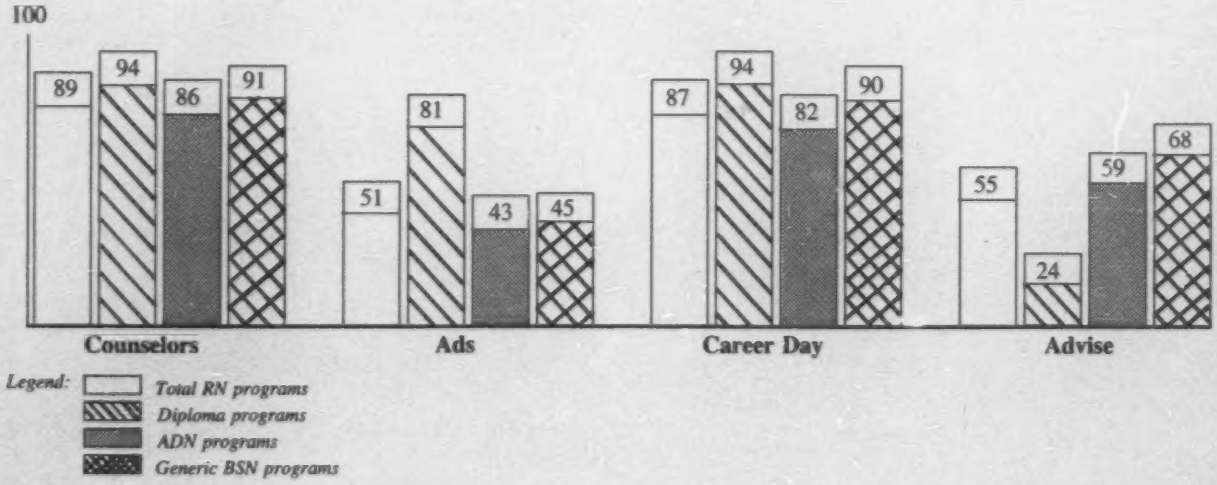
We found that more than 90 percent of the nursing programs that responded to our 1986 survey were continuing to rely on high school career counselors to recruit students; 87 percent were relying on career-day activities. More than half of all the programs were recruiting students through registration-day advisement, but associate degree and baccalaureate programs made up the majority of this category. Diploma programs were most likely to use advertising (see Figure 3).

Among the unique approaches to recruitment that some of the programs listed were television and radio spots, booths at shopping malls and health clubs, open houses, visits to local hospitals to attract licensed practical nurses, alumni activities, and mail campaigns.

Because entire institutions of higher learning are scrambling for students today, nursing programs are competing with other programs on their own campuses for students. Assigning a special nursing recruiter is one step in the right direction. Ninety-two percent of the responding diploma programs, 69 percent of the baccalaureate programs, and 56 percent of the associate degree programs reported that they had specific persons or groups working on recruitment to nursing.

Nursing is a female-dominated profession and will probably remain such for some time. But young women are flocking to other areas within and outside the health care delivery system where the financial and social rewards are greater. The numbers of women

Figure 3. Percentages of Programs that Use Different Recruitment Strategies



entering medicine, pharmacy, optometry, dentistry, law, business, and computer science are growing. This means that nursing programs are competing with other disciplines for the best qualified students. Nursing program recruitment efforts alone won't change this — nursing has to work to boost its economic, social, and political status in the American occupational structure to draw those candidates back.

Our data show that the problems of recruiting and retaining nursing students — and the approaches to solving them — do not vary much in different parts of the country or across schools with differing financial resources. Variables such as geographic region and financial support had little impact on admission requirements or recruitment practices. For example, programs in the West were more likely to offer remedial courses, but the West has the largest proportion of associate degree programs, which offer more remediation in general. In fact, the proportion of program type per region is the best predictor of admission and recruitment practices in a given region. Not surprisingly, more than 70 percent of the responding public institutions offered remedial courses, as contrasted to 40 percent of the private institutions. Otherwise, we found no other significant differences among programs with different levels of financial support.

We did, however, find differences between NLN-accredited and nonaccredited schools. Programs with NLN accreditation were more likely to require specific grade point averages, letters of recommendation, and other qualitative admission requirements than nonaccredited programs. These programs were also more likely to have persons responsible for recruiting.

An appraisal of the current admission requirements and recruitment strategies used by nursing educational programs shows that in general, admissions requirements are minimal, and programs are continuing to try to find ways to bring students in. The nursing shortage is real. The United States Department of Health and Human Services has projected a deficiency of 600,000 nurses prepared at the baccalaureate and higher levels by the year 2000 [4]. Meanwhile, it's harder to find motivated and talented incoming students. However, demographic trends shed light on some promising areas for recruitment. In 1983, Barbara Holtzclaw discussed the problem of the changing applicant pool [5]. Her solution — to recruit individuals with baccalaureate degrees in other fields into nursing — is all the more pressing now. Holtzclaw and others point to older students, part-time students, minority students, and male students as the potential nurses of the future. Recruiting individuals with non-nursing degrees will require developing advanced nursing programs for students who are not only well-educated but who are also likely to be working or have families and require part-time classes and day care. Understanding adult learning will become a necessity among college and university administrators and educators.

Because the proportion of minorities in nursing programs is lower than the national average for colleges, and because the number of black, Hispanic, and Asian youths is expected to grow, minorities are another potential group at which to target recruitment efforts. However, these are the students who often need the most academic and financial assistance to graduate.

Each potential group of recruits, then, requires special considerations — a better understanding of adult learning and the impact of sexism in nursing, day care facilities, remedial courses, flexible schedules, and tutoring. These are some of the areas on which nurse educators must focus now. If, instead, they lower admission standards, the entire profession will suffer, especially now that consumers need the highest quality care possible in hospitals, their homes, and their communities. As Hodgkinson said, "We need to make a major commitment as educators to see that all students in higher education have the opportunity to perform academically at a high level. The task will be not to lower the standards but to increase the effort [6]."

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2. See note 1, above.
3. Gunnerson, Ronnie, "Recruiting Students," *ZIP Target Marketing*, July, 1986: 16–21.
4. United States Department of Health and Human Services, *Fifth Report to Congress*, Government Printing Office, 1985.
5. Holtzclaw, Barbara J., Crisis: changing student applicant pools, *Nursing & Health Care*, October 1983: 450–454.
6. See note 1.

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